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AUTHOR O'Neill, Shirley; Gish, Annabelle
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ABSTRACT

A study investigated ways employers and their apprentices and trainees perceive how these employees' English language and literacy (ELL) skills affect their learning and performance in the workplace in the current context of New Apprenticeships. The research design and methodology involved sending an opinion survey to a stratified random sample of Queensland business employers and their apprentices and trainees and case study interviews conducted in a range of industries across three states. Research stages were literature review, consultation and survey item development, and trial and administration of the survey and site visits. Findings indicated employers were significantly less positive about their employees' ELL skills than the employees themselves, but both groups identified the same skills as in need of improvement. Issues and trends related to differences between employers' and employees opinions, the importance of and approaches to teaching functional literacy skills, debate on the differences between ELL-skill demands for the job compared with those required for learning differences in on-the-job demands across industries, recruitment, transition into the job, and mentoring. Areas for skills clarification and improvement were identified along with issues related to the impact of technological and workplace change and implications for skills related to the concept of lifelong learning. (Appendixes include 75 references and surveys.) (YLB)

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NCVER Australian Apprenticeships

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Apprentices' and trainees' English language and literacy skills in workplace learning and performance

Employer and employee opinion

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AUSTRALIAN apprenticeships

CE 081 822

This research was undertaken Dr Shirley O'Neill, Principal Researcher and Ms Annabelle Gish, Assistant Researcher at Griffith University, Centre for Applied Linguistics and Languages.

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Executive summary

Purpose

The New Apprenticeship system has emerged over the past two years in the context of substantial change in both vocational education and the workplace. There has been a significant increase in uptake of apprenticeships and traineeships, and apprentices and trainees are now likely to have completed more than the traditionally required ten years of schooling. There has also been an increase in the number of school-based apprenticeships and opportunity for existing employees to undertake apprenticeships and traineeships as well as opportunity for greater flexibility in delivery of training.

Changes have also occurred in the workplace in terms of use of computers, technology and media, along with changes in the nature of work, to the extent that it may be argued today's apprentices and trainees may be facing new challenges in terms of English language and literacy (ELL) skills in the workplace. This research set out to investigate the way employers and their apprentices and trainees perceive the way these employees' ELL skills impact on their learning and performance in the workplace in the current context of New Apprenticeships.

Research activity

The research design and methodology involved an opinion survey to a stratified random sample of Queensland business employers and their apprentices and trainees, and case study interviews conducted in a range of industries across three States. The research was conducted in three main stages: literature review, consultation and survey item development, trial and administration of the survey and site visits.

Findings

The investigation revealed a complex situation in terms of both policy and practice. Employers were significantly less positive about their employees' ELL skills than the employees themselves, but both groups identified the same skills as in need of improvement. Issues and trends related to differences between employers' and employees' opinion, the importance of, and approaches to, teaching functional literacy skills, debate on the differences between ELL-skill demands for the job compared with those required for learning, differences in on-the-job demands across industries, recruitment, transition into the job and mentoring. Areas for skills clarification and improvement were identified along with issues related to the impact of technological and workplace change and implications for skills related to the concept of lifelong learning.

The importance of ELL skills

Apprentices and trainees perceived their ELL skills as quite adequate for their workplace learning and performance. Employers were much more critical in terms of apprentices' and trainees' ability to communicate effectively in the workplace and their functional literacy skills. Perceptions of the adequacy of apprentices' and trainees' ELL skills differed between

employers in different industry areas. However, employers of apprentices were consistently more positive about these employees' ELL skills. The apprentices in the sample had higher educational entry levels than the trainee group but the age range for trainees was greater.

The results of the research clearly show that employers place great emphasis on apprentices and trainees having adequate ELL skills in conjunction with a range of other organisational skills, knowledge of business operations, as well as attitudinal-related qualities they perceive as influencing workplace performance. From the employer perspective, ELL skills are associated firstly with the physical evidence resulting from workplace literacy-related tasks, including written job applications. Apprentices' and trainees' ELL skills were viewed as having a profound influence on workplace performance as well as learning. It was the general view that written texts, composed by employees primarily for an audience in the public arena, should be presentable in terms of legibility if hand written, accuracy of spelling and punctuation, sentence structure and meaning.

Apprentices and trainees, on the other hand, were very confident of their ELL skills and tended to emphasise their ability to actually carry out the work as being the best evidence of their skills. Both the employers and employees agreed that the ELL skills which were least adequate related to using computers as required, spelling and punctuating writing, writing legibly and interpreting graphical information. The need to develop employees' understanding of how business works and relates to providing quality customer service was also seen as making an important contribution to workplace learning and performance by employers. While employers were generally happy with the way their apprentices and trainees communicated with colleagues and worked to achieve a team goal, interpersonal communication skills to deal with more demanding situations emerged as an area requiring development.

Functional literacy skills

The inadequacy of functional literacy skills was a major issue for employers. Producing high quality documents was viewed as essential to successful business operations. Poorly written documents were seen as impacting on business in two ways. First, poor handwriting, inaccurate spelling and inadequate sentence construction were seen as detracting from the business' image which the employer wished to project to the public. Second, the resulting lack of clarity of meaning had the potential to expose businesses to unnecessary risks in terms of complaints about the work involved, including the risk of litigation. Similarly, where work related to reading information to carry out the work, such as accurately fulfilling requests for goods, errors in reading comprehension also had the potential to cost the business extra money because goods had to be returned and replaced. From the employer perspective, employees were seen as needing to pay attention to, and demonstrate, adequate ELL skills, along with a range of other skills and knowledge to carry out the work, progress in the job and follow a career path.

The teaching of ELL skills is largely seen as the responsibility of those with specific expertise in the area, although training is expected to accommodate a wide range of learner backgrounds and skills. Current policy and approaches to training integrate ELL skills into training packages. Integration is expected to ensure that ELL skills are addressed in the context of the workplace, since they go hand-in-hand with the various units of competence which rely upon these skills. However, the degree to which ELL skills are made explicit in training packages may vary in accord with different writers and the different literacy profiles of different jobs across industries. Delivery may also vary depending on the mode and the ability of the trainer to cater for a range of student backgrounds. However, there are many resources to assist with developing ELL skills, and specialist assistance is available to apprentices and trainees.

Guidelines in Queensland (DETIR 2000) focus on assessing apprentices' and trainees' needs in this area so that training programs can build on and develop existing skills and appropriate assistance or intervention can be provided or advised as necessary. Research on developing

ELL skills in vocational education and training (VET) cautions against identifying employees out for separate tuition because of the danger of stigmatisation. Employees who are perceived as requiring development of these skills are likely to be discounted as likely candidates for future promotion. As a consequence, employees may feel inadequate and suffer low self-esteem. Additionally, other less overtly demonstrable, valuable skills which an employee has to offer may be overshadowed by perceptions created by the prominence of poor handwriting, punctuation, spelling and grammar.

ELL skills for work and for learning

Apprentices' and trainees' readiness to accommodate the ELL demands of the workplace also emerged as an important factor. The extent to which school ELL skills provide a foundation for the demands of the workplace in terms of performance and learning is not clear. Although employers clearly expect schools to prepare students for work in terms of literacy and numeracy, there may be poor transfer of skills developed at school to those required in the workplace (Prince 1992). This is reinforced by other research which has shown school literacy involves 'reading to learn' compared with workplace literacy focussing on 'reading to do' (Diehl & Mikulecky 1980; Baylis, Caldwell & Nussbaum 1991). However, from the perspective of employers and employees there seems to be little distinction, and literacy skills continue to be associated with reading and writing regardless of purpose. Thus, if employers and employees, trainers and policy-makers are to be aiming for a common goal then it seems these skill demands and the demands of learning need to be reviewed to make visible the skills' development pathway from school to work and lifelong learning. There is also a need to review these skills in the light of the demands of technology and the concept of a knowledge-based economy in the 'new world of work'.

The trend in training is to ensure that the ELL skills demanded by the training experiences do not exceed those of the job (DETIR 2000). This raises the issue as to how feasible it is for employees, in jobs which have limited ELL demands, to embark on a training pathway which does not demand higher level ELL skills or additional ELL skills. There is a dilemma in terms of how one may acquire new knowledge or develop learning-how-to-learn skills when starting from very limited ELL skills. Again, variation in ELL-skill demands across jobs in different industry categories—such as clerical workers, foundry and engineering workers and hairdressing—are substantial. Since employers of trainee clerical workers were much more positive about these employees' functional literacy skills compared with employers in other industries suggests the level of ELL skills demanded by the job may influence workers ELL-skills development and maintenance. The visibility of written texts makes skills associated with writing more prominent, but the need for effective oral communications skills and interpersonal skills is also at the core of workplace communications, both internal and external, and should not be underestimated. The ability to communicate effectively with supervisors, colleagues and customers and work in a team is an important part of work which relates to English language skills. The challenge for the trainer is to assess workplace tasks in terms of the underlying ELL skills and provide an inclusive curriculum which caters for the ELL-skill needs and gaps.

ELL skills and training-related outcomes

Completion rates in VET suggest that apprentices' and trainees' ELL skills for study are at least as good as the general population in VET or better, since these employees attain the same level of completion but study more course modules more intensively. The fact that these units are generally at Certificate III level for most apprentices and trainees also provides an indication of the underlying ELL-skill demands for learning.

Training programs generally expect apprentices and trainees to have 'basic ELL skills' to engage with the program, although composing written texts may comprise only a small part of the overall work in some industries or have very limited application—for example, take a short telephone message. It appears that while the ideal in training is to deliver a program which does not require ELL skills at a level beyond those required on the job, this issue is

debatable. First, since almost half the workforce work at the operational level and most VET enrolments are at Certificate III level then it is quite likely that training will involve some ELL skills not used in the workplace. Second, training is likely to involve at least some acquisition of knowledge over a set time frame and, in some cases, use of distance education materials and multimedia, thus supporting the argument that ELL skills for training are likely to be more demanding than the workplace. Third, if the employee is to aspire to the path of lifelong learning then this assumes ongoing development or possession of ELL skills to 'learn how to learn', including information literacy skills, research skills and critical-thinking skills and an attitude to learning to make this choice of pathway accessible.

Employment of new apprentices

Employers tended to see the recruitment and selection process as ensuring their apprentices and trainees had adequate ELL skills. Job application presentation and written text were seen as providing some evidence of applicants' literacy skills. However, this apparently did not necessarily ensure the selected employee subsequently met their needs. Criticism of employees' functional literacy skills appeared to be intertwined with perceptions of their attitude to work and level of maturity. When it came to considering employees for advancement, employers were influenced by their apprentices' and trainees' attitude to the job, the adequacy of their ELL skills, particularly functional literacy skills, and their ability to get along with customers and colleagues.

From the apprentices' perspective, there was a request for the apprenticeship program to follow a very strong mentoring process with emphasis on expert demonstration, guided practice and scaffolding support until independence was achieved. It was seen as important for the mentor to be sympathetic to the on-the-job learning situation and to have the skills to demonstrate and support apprentices' and trainees' learning.

Areas for improvement

Both employers and employees identified use of computers, the ability to write legibly and spell and punctuate writing, and interpret graphical information as areas for improvement. The need for improvement in the area of interpersonal skills underpinning teamwork and communication between employees and customers and supervisors, particularly when there is potential conflict, was also identified.

Adequate ELL skills were also seen as important for employees' career potential. This view was associated with both workplace demands and the ELL skills needed to acquire new knowledge.

While the integration of ELL skills into training packages is sound policy and functional skills are comprehensively described in the National Reporting System (NRS), additional information is required to enable more consistent, effective delivery in keeping with organisational and technological changes occurring in the workplace and employer requirements. The ways ELL skills relate to other skills, and qualities employers identify as important to the job, also need to be addressed in terms of putting ELL skills into practice. There is a lack of a system view or an across-industry view of the scope, range and demands of ELL skills for both workplace performance and learning and in the context of workplace change and lifelong learning.

The need for greater emphasis on a mentoring process was suggested as being the best way to model workplace practices and create a positive learning environment in which ELL skills and other competencies could be developed. This was also seen as assisting employees to understanding business operations and ultimately gain confidence in doing the work.

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Workplace change

Organisational and technological changes are seen as increasing literacy skill demands in the workplace (Eubanks 1990; Grover 1990; Doyle 1992; Kirsch & Jungeblut 1992). These demands relate to greater reliance on higher level cognitive skills in the use of technology, as well as greater opportunity to use technology in learning and be information literate. Employers also raised this issue in addition to the need for functional literacy skills. The emergence of needs for skills with technology is also reflected in both employers' and employees' identification of the need for improvements in the use of computers. In the light of the need for acquisition of these skills as well as 'learning how to learn' skills within the context of the 'knowledge based workplace' (Burnheim 1992), it is suggested that there needs to be a reassessment and definition of ELL-skill demands and how they relate to different jobs across different industries.

Recommendations

- The relationship between ELL skills required for the purposes of learning and ELL skills required for performance on the job needs to be clarified such that if learning demands exceed the ELL skills required to do specific work, account may be taken of this by policy-makers, trainers and apprentices and trainees to ensure training addresses both learning and performance.
- Consideration should be given to (a) conducting a comparative analysis of the ELL demands of the major job groups and (b) developing a user-friendly framework which links to the NRS and which may be used as a guide for both training and assessment. This would need to keep faith with the policy of integrating these skills into training yet provide assistance in identifying ELL requirements for learning and performance to ensure a more comprehensive and systematic approach to ELL competency.
- There needs to be a scan of the role and use of computers for both learning and performance on the job and across jobs to clarify the level of uptake of technology in learning and work and the associated ELL demands so that skill gaps can be identified and adjustments made in training accordingly in terms of policy and programs.
- Consideration should be given to the development of a resource which may be used to model the training situation. This should illustrate how to create a positive workplace-learning environment and focus on the role of a mentor, the role of, and development of, interpersonal skills and provision of more intensive training on orienting employees to the notion of the business plan and business operations.
- In view of the changing demands of work and the goal of lifelong learning, there is a need to identify how ELL skills relate to this process of learning and how they may be dealt with in training in the current context of increased access to information, opportunities for total on-the-job delivery of training, increases in school-based apprenticeships and increased opportunities/access to a range of learning modes and resources, including CDROMS and on-line delivery.
- The conduct of longitudinal case studies of apprentices/trainees across a range of industries, comparing those beginning in school-based apprenticeships with those who enter from other educational backgrounds. This would provide valuable comparative information on ELL-skill development for workplace learning and performance and would identify the relationship of these skills to other skill demands, including those related to self-development and lifelong learning.

Background

English language and literacy skills and vocational education and training

Achieving educational outcomes in terms of English language and literacy (ELL) skills continues to be a priority in all education sectors. Since Vocational Education and Training (VET) encompasses all the educational and training experiences that provide individuals with the competencies required in employment (National research and evaluation strategy 1997–2000, NCVER 1997), it is not surprising that ELL skills have been a strong focus of policy and programs, particularly in recent times (DEET 1995a). It is also not surprising that ELL skills are a priority of VET when one considers various research findings to do with adult literacy levels and the literacy level of workers (Wickert & Kevin 1995; ABS 1997).

In Australia, the results of Wickert and Kevin's (1995) survey of Australian adult literacy identified low levels of literacy across a range of literacy areas. Almost 70% of the sample were found to have difficulty identifying the ideas in what they were reading. Performance on literacy tasks was found to be influenced by level of schooling, level of skills and health and socioeconomic factors. Respondents who had undertaken post-school education performed at the average level or better on prose literacy activities. Wickert and Kevin (1995, p.50) concluded:

> *what is apparent is that the answer to solving Australia's adult literacy problems is not easy. It is not enough to argue that the schools should be doing a better job . . . More adults need to help to improve their literacy skills than we thought, and not just at the Rudimentary and Basic levels.*

Further to this, an Australian Bureau of Statistics survey conducted in 1996 (ABS 1997) found that almost 50% of workers experience difficulty with some literacy tasks. Similarly, it has been reported that:

> *6.2 million Australians between the ages of 15 and 64 have poor or very poor literacy and numeracy skills. These people could be expected to experience difficulties using many of the printed materials encountered in everyday life, a factor which in turn effects their ability to learn new skills and process information* (ANTA 1998, p.15).

Current Federal Government initiatives encourage unemployed persons, including those from priority groups (for example, Indigenous and non-English-speaking backgrounds), to develop their ELL skills, assuming a link between these skills and the uptake of paid work. Low level literacy skills are also associated with youth unemployment. The rate of unemployment for young people (16.3%) is significantly higher than the national average, with 18.6% of this age group undertaking VET (NCVER 1998). Literacy is also a concern of current programs designed to support adults seeking to further their education.

Marks and Ainley's (1997) report examines Australian junior secondary students' performance, and levels of mastery, on tests of reading comprehension and numeracy between 1975 and 1995. Their analysis was based on data from two national monitoring studies and other studies of representative samples of junior secondary school students which were designed to monitor the progress of young people through school into further education, training and work. The assessment activities focussed on reading skills and numeracy. They argued that it was sufficient to focus on assessing reading skills to gauge literacy levels because these skills correlate highly with other aspects of literacy. In general,

Indigenous students and students from non-English-speaking backgrounds and those from low socioeconomic backgrounds performed at lower levels than the general population. These trends emerge as early as primary school at Year 5/6 in Queensland (QSCC 1998) and continue into secondary (O'Neill & Hobbs 1998).

Since a substantial number of people entering apprenticeships and traineeships are aged between 15 and 24 (14.4% of Australians, population 18.5 million, are within this age range) and level of schooling may influence performance on literacy tasks (Wickert & Kevin 1995), it is highly likely that apprentices' and trainees' past educational experience and ELL skills will impact on their transition to work and their ability to cope with the learning and performance demands of the workplace. However, there is little information available on the way ELL skills impact on apprentices' and trainees' learning and performance in the workplace, and recent changes to develop the New Apprenticeship system have created a new context of operation. For instance, the New Apprenticeship system incorporates both apprentices and trainees who are likely to have more than the traditional ten years of schooling on entry and there has been a significant increase in the number of apprentices and trainees.

There has also been a parallel move towards provision of training related to national standards under the Australian Qualifications Framework (AQF), the opportunity for recognition of prior learning and the increase of VET programs in secondary schools to include students in Years 11 and 12. This has provided opportunity for more flexible vocational pathways and modes of delivery of training with use of national training packages providing a multi-pronged approach with the potential to lift the level of vocational education outcomes. Within this context of substantial change, changes have also occurred in the workplace in terms of use of computers, technology and media. The nature of work and traditional views of literacy have also been under scrutiny (Wickert 1993; Gee, Hull & Lankshear 1996; Schultz 1997; Brock 1998; Ray 1999), and amid workplace reform, job redesign, restructuring and modern management practices new emphases have emerged, such as the ability to work in a team and be information literate. However, the need for high quality foundation learning in school remains essential (OECD 2000). In the light of this rapid change, it may be argued that apprentices and trainees in the New Apprenticeship system face different challenges, particularly with regard to their ELL skills. Thus, as a starting point, this research sets out to investigate the way employers and their apprentices and trainees perceive the way these employees' ELL skills impact on their learning and performance in the workplace in the current context of New Apprenticeships.

Research focus

Research purpose

The purpose of the research was to investigate the extent to which the ELL skills of apprentices and trainees are perceived as effecting their learning and their performance in the workplace. It was intended to provide information on how the VET system is seen to be working in practice given that there are policies, processes, programs and resources in place to assist in the delivery of needs-based courses which identify and integrate the teaching of appropriate ELL skills to apprentices and trainees.

Objectives

The objectives of the research were:

- to gauge employer and apprentice/trainee opinion on the extent to which apprentices' and trainees' ELL skills affect their learning and performance
- to identify the issues and outcomes involved in the practical application of ELL skills to apprentices' and trainees' learning and performance in the workplace
- to provide an indication of the extent to which the ELL-skill background of apprentices and trainees relates to subsequent learning and performance in the workplace
- to examine how learning programs and the integration of literacy skills impact on apprentices' and trainees' learning and performance in the workplace
- to examine how the ELL-skill demands of the workplace impact on apprentices and trainees

Review of literature

Patterns of course and industry choices

Traditionally, the duration of an apprenticeship has been four years and a traineeship one year. Apprentices and trainees usually spent 20% of the time in off-the-job training compared with 80% of the time learning on the job while in paid employment. The implementation of New Apprenticeships at the start of 1998 has

> *introduced greater flexibility by providing for variation in the duration of training, different mixes of experiential and formal learning, and a choice of training provider for the off-the-job component. In addition, the New Apprenticeship arrangements have formally abolished the distinction between apprenticeships and traineeships. The Australian National Training Authority and the Commonwealth expect the new arrangements to change the structure of training programs and patterns of participation, and to create new and more varied training opportunities, particularly for young people* (NCVER 1999a, p.7).

Ray (1999) notes that the changes to policy meant that New Apprenticeships became available for existing employees as well as new employees and included school-based and part-time apprenticeships and traineeships. Another major change was in the area of training provision and delivery. Employers, apprentices and trainees now have access to a range of providers from technical and further education (TAFE) and the private sector. This has coincided with increased opportunity for flexible and total on-the-job delivery through the introduction of training packages.

Ray (1999, p.34) points out that the so-called 'transition from the industrial age to the information age' experienced during the past decade has had an impact on the nature of work and ultimately training. He cites a report (KPMG 1998, p.2) which notes that there are fewer skilled tradespersons in the workforce, and fewer potential skilled supervisors for apprentices, work previously undertaken by skilled tradespersons is often outsourced, there has been an up-skilling of production workers and a decline in the number of suitable recruits to undertake apprenticeships. Marshman (1998) also draws attention to this trend in relation to an apparent lack of suitable recruits and an associated downturn in employment of apprentices in engineering in Victoria. Attention is also drawn to the limited research into entry-level training with respect to apprenticeships and traineeships (Robinson 1998).

A major consequence of the change to the New Apprenticeship system has been an increase in apprentices and trainees, including school-based apprenticeships. Queensland, in particular, has a large number of school-based apprenticeships and has more traineeships than apprenticeships overall. During 1997 there were more than 350 000 apprentices and trainees in Australia (NCVER 1999a). Of those studying with a TAFE provider, almost 25% were female and almost half were in the age group 15 to 19 years. However, these figures are almost reversed for the general VET population, with only approximately 20% belonging to the younger age group and almost half being female. In general, most apprentices and traineeships are undertaken by those aged 17 to 29 years.

With regard to gender, traditionally the majority of apprentices have been males. However, the recent trend towards New Apprenticeships, together with improved access and pathways, is expected to facilitate a gradual change. Current information also shows that most apprentices and trainees were enrolled in Australian Qualifications Framework (AQF) or

equivalent courses at Certificate Level III or higher. Enrolment records show that most were male (82%) and almost half were aged between 17 and 19 years of age (NCVER 1999a). It is also of interest to note that more females compared with males are enrolled in lower level courses, such as AQF Certificate I and II.

Based on course enrolments for 1997, almost 40% of apprenticeships and traineeships were in engineering and surveying, with close to 17% in services, hospitality and transportation and 16% in architecture and building (NCVER 1999a). It is also known that approximately 35% of apprentices and trainees studied engineering and processing, with almost 14% studying administration, business, economics and law, built environment 12% and a further 12% hospitality, tourism and personal services. Of further note is the fact that apprentices and trainees tend to undertake more training modules during a year than general VET students. Many general VET students also complete training modules on a part-time basis or take short courses. Thus, there appears to be more pressure on apprentices and trainees to use their ELL skills to undertake training compared with general VET students.

Education background and completion rates

An examination of completion rates for schooling shows that for 1997 almost half of apprentices and trainees had completed Year 12 (in excess of 45%) compared with a substantial proportion having left school at Year 10 or lower (36.5%) and a smaller proportion who had completed Year 11 (18.4%) (NCVER 1999a). Data on completion rates have also shown that during 1997 almost 65% of the modules which apprentices and trainees were enrolled in were successfully completed. Of further relevance to the research is the fact that no significant difference was found between the completion and non-completion rates for apprentices and trainees and the general VET student population, although close to 50% of those in the age group 15 to 19 years enrolled in three to ten modules, while only 35% of all VET students followed this pattern of learning. Thus, on the basis of completion rates, learning outcomes for apprentices and trainees are on a par with, or better than, those for the general VET population. When hours of off-the-job training are considered, almost 67% of apprentices and trainees in the younger age group were involved in 200 to 540 hours of training compared with only 25.8% of all VET students. However, Ray (1999) identifies an increase in wastage through training as an emerging concern for the 1990s, with preliminary data showing wastage rates for traineeships as greater than those for apprenticeships.

Change

Increase in uptake of New Apprenticeships

An examination of VET outcomes since 1995 shows a substantial increase in the uptake of training. The fact that most enrolments are at Certificate III Level provides some evidence of the demand for ELL skills for learning. NCVER (1999a) provides the following facts:

- apprentice and trainee commencements grew strongly from 64 470 in 1995 to an estimated 133 750 in 1998
- the number of apprentices and trainees in-training grew from 144 900 in 1995 to an estimated 206 370 in 1998
- in their off-the-job training, the majority of apprentices and trainees undertake a course at AQF Level III or higher (up to 80% of enrolments in AQF or equivalent courses in 1997)
- the number undertaking a contract of training of more than two years in duration (a proxy for 'traditional' apprenticeships) grew by almost 11% in 1998

There has also been an increase in the number of 15–19-year-olds participating in training as well as an increase in females in-training and commencements in rural areas have increased from 27.5% in 1995 to 31.9% in 1998.

Employer groups and industry areas

There has been some variation across the various sectors employing apprentices and trainees, with the most growth being in group training companies and government business enterprise. Some industry areas remain the most popular choices and their strong gender differences are again evident when industry choices are examined for apprentices and trainees:

- the vast majority of apprentices and trainees were employed by the private sector, although the proportion decreased slightly from 77.9% in 1995 to 76.8% in 1998
- the proportion employed by group training companies, the second largest employer of apprentices and trainees, increased from 13.6% in 1995 to 15.8% in 1998
- the proportion of apprentices and trainees employed by the Commonwealth Government decreased from 2.2% in 1995 to 0.7% in 1998
- the proportion of apprentices and trainees employed by the State Government decreased from 4.0% in 1995 to 3.4% in 1998, although this was not a steady decline with the proportion of apprentices and trainees being employed by State Governments being somewhat erratic over the period 1995 to 1998
- the greatest growth rate was in the government business enterprise category

NCVER (1999b, p.9) states that:

> *apprentices and trainees were most likely to enrol in the engineering and surveying (37.1%), services, hospitality and transportation (16.8%) and architecture and building (15.6%) fields of study. In contrast to this, veterinary science and animal care and law and legal studies comprised relatively small proportions of enrolments at 0.1% and 0.7% respectively.*

It is also noted that a much larger proportion of males than females were enrolled in engineering and surveying (97.3% males), architecture and building (98.4%), land and marine resources (86.1%), VET multi-field education (77.3%), law and legal studies (74.5%) and science (61.4%). By contrast, female enrolments were proportionally stronger than male enrolments in education (85.9%), veterinary science and animal care courses (81.8%), health and community services (66.5%) and business, administration and economics (66.1%).

The younger age group tends to participate in longer contracts of training which are usually apprenticeships rather then traineeships, the latter being up to two years in duration (NCVER 1999b, p.10). The top four trades are vehicle manufacture, metal fitter, carpenter and joiner, and electrical mechanic and account for one-third of all trades employed. These trades tend to have above average levels of post-school qualifications, with two of the fastest growing trade occupations of gardener and cook reflecting the lowest post-school qualifications (Ray 1999).

Literacy in the workplace

Any investigation of ELL skills needs firstly to consider how these terms are defined in the field of vocational education. In addition, this needed to be considered in the design of data collection instruments to reflect current terms and practices, particularly when the intention was to gauge the opinion of employers, apprentices and trainees.

Patterson (1996, p.10) states 'literacy is about how people use written language, that is reading and writing'. However, she emphasises that reading and writing also involve being able to act upon what is read and ensure the message of what is composed can be understood. She also specifies that numeracy is a part of literacy because it involves recognising mathematical signs and symbols. However, opinions about literacy in particular often vary. In a survey to employers, and teachers from the secondary and primary education sectors, Cahill (1998) found differences between these three groups' views on literacy. Although the majority of each group associated communication with literacy, 90% of employers and secondary school teachers defined literacy as the ability to read and write. While half of the primary school teachers also defined literacy in this way, they also included information about 'making

meaning' and communicating to a range of audiences for a range of purposes. This latter expanded and suggested, more critical view was attributed to the particular in-service training to which these primary teachers had participated (conducive with approaches in literacy education such as the Early Literacy Inservice Course (ELIC), Education Department of South Australia 1984).

Employers' views of literacy were seen as supporting a more traditional concept which was thought to be drawn from their 'universal expertise' rather than any specialist knowledge. When views of literacy are placed on a continuum ranging from the more traditional to critical, the views of secondary school teachers tended to be closer to those of the business people. Findings were interpreted as suggesting that the business people group were more likely to equate literacy with the ability to write with correct spelling, punctuation and grammar. They also valued 'the ability to communicate clearly and think critically'. Business people were also seen to be in a strong position to gauge public opinion with respect to literacy because of their need to promote their businesses. Cahill (1998, p.13) also argued that:

> *discussions of literacy need to emphasise its complex, holistic nature and avoid preoccupation with single elements. When elements are considered one at a time, there is a tendency to overstate the importance of low-order elements (spelling, punctuation, etc.) at the expense of high-order elements (critical thinking, awareness of audience, etc.).*

This traditional view of literacy is argued by Gee, Hull and Lankshear (1996) as a narrow concept which focusses mainly on psychological ability. In adopting a broader post-modernistic perspective, they argue that the social practices of the workplace induct the worker into a particular Discourse. In this sense, Discourse refers to the way a particular group or subgroup, such as mechanics, bricklayers, hairdressers, nurses or teachers, behaves. This behaviour includes how they communicate, interact, read and write, what they value, and how they use resources and tools of the trade. When applied to the examination of the impact of employees' ELL skills on learning and performance in the workplace, it alerts one to the argument that employees operate within a Discourse-specific situation where the business strategy agenda represents the business' interests first. This is seen as being in spite of the argument for having workers who are highly literate and can think for themselves. Second, it draws attention to the current discussion on sociocultural approaches to language and literacy and the concept of the learning community and collaborative learning. In this context, the notion of functional literacy and being accurate with spelling, punctuation and grammar is argued to be a construction of society, which may be seen as contributing to the maintenance of the status quo. While this may be so, at the operational level of any workplace, it may be argued that there is a strong dependency on effectiveness communications. Without such effectiveness work objectives would suffer, with consequences likely to interfere with productivity, business viability as well as workplace health and safety.

Watts and Watkins (1991) in their discussion of the impact of increased retention rates on post-school education and the division between preparation for university and vocational programs noted the importance of literacy as underpinning people's capacity to learn. Readiness may be considered at any stage of entry into a course of learning. Thus, the importance of having an appropriate level of ELL skills is well recognised as making a major contribution to an employee's ability to function in the job and undertake ongoing learning in the pursuit of future career pathways. Similarly, the concept of the lifelong learner demands one has skills to adapt and change to suit workplace changes. Such skills include the ability to communicate and think critically in the language in use.

In the current education and training context, literacy skills, along with numeracy skills, have become a major focus for teaching and assessment at various points in time during schooling. The convergence of secondary education and VET and the establishment of vocational pathways within the AQF has also incorporated a focus on ELL skills. It is not surprising, therefore, that in recent times much has been done to integrate ELL skills into workplace training (DEET 1995a). These skills not only relate to apprentices' and trainees' ability to undertake study and to follow instructions but they underpin their ability to communicate and interact effectively at the interpersonal level with employers, colleagues,

teachers/training providers as well as customers. The adoption of an integrated approach in preference to separate modules on ELL is in keeping with principles of effective learning and authentic learning experiences. Such policy aims to encourage use of learning experiences which replicate real life workplace duties rather than being abstract and isolated from the job.

Courtenay and Mawer (1995, p.3) state that 'a changing industrial environment and new technology have increased workplace communication requirements'. They emphasise the need for vocational training to be able to facilitate organisational change through the ongoing development and upgrading of skills. Vocational training was viewed as being in a stage of expansion to cater for a much wider range of learners. The point was made that at this time, while almost half the workforce worked at the operational level, this group received only a small part (12%) of the training resource. They also noted that:

> *some estimates suggest that up to one in seven workers has significantly limited language, literacy or numeracy competence. While this is spread across the occupational levels, limited competence in these areas is greater at operative levels and in some industry sectors is estimated to involve over 80 per cent of the workforce* (Courtenay & Mawer 1995, p.3).

Thus, the move to integrate language, literacy and numeracy (LLN) skills into training packages is of prime importance because of the direct link between competency-based industry standards and the skills recognition process, training course/curriculum development and accreditation. Even though Courtenay and Mawer (1995, p.5) state 'there is no simple link between language proficiency and workplace competence, even in jobs that involve considerable communication', the fact that a certain level of literacy is necessary, to both undertake work as well as access training, makes consideration of these skills essential. This also highlights the importance of validly and reliably being able to assess these demands. Similarly, delivery of training programs needs to be based on valid and reliable assessments of job requirements and employees' existing ELL-skill levels.

The national strategy for VET facilitated development of initiatives to cater for priority client groups' literacy needs and for the integration of ELL training in VET programs. Other training reforms in 1995 included the requirement that competency standards should incorporate LLN competence. The national framework of adult English LLN competence which applies to adult basic education curriculum development (RMIT Applied Linguistics Unit 1994; Highet et al. 1994) has also been a major influence on the way ELL skills are dealt with in VET.

A major response to these needs was the development of the Industry Training Advisory Board's (ITAB) Workplace English Language and Literacy (WELL) project (DEET 1995a). The aim of this project was to integrate literacy, numeracy and communication in workplace technical training and to integrate language and literacy competencies into technical standards (Parkinson 1996). In addition, Workplace Language and Literacy in Action (WL&LA) was set up as an all staff development initiative (now defunct) to assist the implementation of integrated ELL programs within the VET system. Change was also promoted by the recognition at this time that it was both possible and desirable to mainstream vocational courses to more directly address students and workplace ELL-skill needs and that there was a need for improvement of these skills. Details of projects which have focussed on integrated approaches and related issues have been published (Hamilton 1992; Courtenay 1994; Courtenay & Mawer 1995, Kelly & Searle 1999), and examples of good practice across a range of industries (Rizzetti 1995; Wallace & Murray 1997) are also available.

An evaluation of a WELL project in the construction and engineering industry (Hislop 1994) identified a number of factors impacting on the workplace in relation to ELL skills. The project was undertaken because the company was aware that its employees did not have the communication skills to understand the need for workplace reform or to participate in the change process. They considered the benefits of improving these skills both from the company and employee perspective. Language and literacy training was seen as vital to ensure workplace health and safety, to develop employees' confidence and self-esteem and to undertake skills training successfully. Being able to communicate well was also seen as

impacting on productivity. Workplace communication problems were identified in relation to a range of activities and effected both workers and managers. Such problem activities included completing forms, understanding directions, asking questions, completing records, misinterpreting messages, instructions and plans, and lack of understanding of quality assurance and workplace health and safety requirements. These communicative problems were seen as having a major negative impact on both workplace production and workplace learning in terms of the extent and effectiveness of skills training.

The provision of LLN tutorial sessions for individual workers—at the rate of one per week—was found to be very valuable for improving skills on the job and providing support for workers who otherwise would have had difficulty undertaking further skills training. However, the downside of this approach was the potential for those who attended to be stigmatised. This approach was viewed by other employees as more legitimate for workers from non-English-speaking backgrounds. It was found necessary to ensure that the workers understood that career progression was related to their undertaking LLN training and skills training. Workers were assessed as improving in a range of skills, increasing their confidence to communicate and facilitating their ability to communicate with colleagues and management. The areas of improvement included spelling, vocabulary, expressing opinions and making suggestions, asking and answering questions, describing and explaining workplace processes, tools and equipment, discussing safety issues, discussing mathematical functions and describing shapes and dimensions, understanding instructions and completing forms. Ultimately, the skills training plan addressed workplace LLN together with safety training, materials handling, specialised equipment and practical skills through development and trial of core general skills modules from the National Building and Construction Industry Training Council (NBCITC). In the development of industry trainers' skills, emphasis was placed on making training accessible to all workers. Attention was paid to increasing trainers' awareness of the way language, literacy and cross-cultural issues impact on workplace training and developing techniques which identify and build on workers' existing skills.

Deakin and Sims (1994) outlined program content for an elective subject on work undertaken in relation to foundry work in the vehicle manufacturing industry. ELL activities involved specific vocabulary which related to processes, products and customer specifications. They included reading reports, notices, gauges, temperatures, schedules, date codes, recipes, charts and graphical information, writing activity sheets and notes for laboratory work and class work, and understanding and calculating in relation to temperature, ratio, decimals and percentages. A typical workplace document comprised a highly structured process intent sheet which related to the procedure for the foundry casting process of a particular cast. It contained a list of instructions, a list of consequences and the action to be taken if the process failed, an annotated diagram and a statement or checklist on how to check for success or failure. The employee needed to read and understand the content and apply it to the practical work, make decisions on the basis of the information read, together with the practical outcome of the casting, and finally record such information as name, date and approval details. Part of the assessment for this unit was a practical study which was flexible enough to take account of learner needs and aspirations. These studies involved such activities as monitoring quality, testing metal qualities, documenting and observing procedures and products, reviewing and researching existing workplace production records and products, and completing a log of activities. The practical study also involved collecting specific information and asking questions of colleagues. The specific learning experience was intended to provide employees with the opportunity to think about and apply their knowledge of the workplace, gain new knowledge of the workplace, negotiate with colleagues, plan and organise activities in the workplace, analyse information, solve problems, document and present information and develop research skills. An exemplar log showed that a particular employee had consulted with the works' superintendent, his supervisor, a workplace technician and the teacher during the study. He had also spent time at home drafting his report, proofreading and editing and preparing a verbal presentation of his findings. Because the culturally diverse nature of the employee group brought a wide range of skills, abilities, experience and language proficiency to the training situation, successful participation was viewed as dependent upon more than a particular level of

English. For this reason, ELL skills were targeted as a program outcome rather than a prerequisite. In this context, it was intended that learning experiences would be flexible and supportive enough to build on employees' existing skills.

It was concluded that the program improved participants' confidence and risk-taking behaviour associated with using language skills, analytic and critical thinking and writing in particular. While participants managed the mathematical applications for their own area, there was a general lack of confidence with mathematics and 'the sight of graph paper was particularly anxiety provoking' (Deakin & Sims 1994, p.113). The practical workplace-based integrated ELL learning experiences were also seen as facilitating employees' participation in the language and discourse of workplace supervision, management and the technical systems in operation. It was concluded that training programs must incorporate the authentic language and literacy of the workplace to be successful. Conventional notions of literacy alone were seen as insufficient when considered against this authenticity. Factors in addition to ELL skills were stressed as being of equal importance for workplace learning. This research showed that employees need to access the dominant discourse of the workplace to be successful and that this is best taught through a practical workplace-based integrated approach. The point was made that such an approach should not focus on a deficit model of conventional isolated literacy skills.

In Stuart's (1996) study of the food, beverage and pharmaceutical processing industry, the fact that employee roles at the operator level have changed in recent times was raised as an important consideration from the language and literacy perspective. These roles are seen as more demanding in terms of increased worker responsibility in the job and expanded language use. This expanded language use was seen as involving all four macro skills and relating to such activities as discussing workplace matters (including the way work is organised), working in a team environment, writing or making an oral report on workplace matters (e.g. accidents) and providing on-the-job instructions. The importance of achieving a balance between the ELL skills required to do the job and those required to access and undertake training is also emphasised. It was noted that qualifications profile of the food industry was particularly low, and between 50% and 75% of both English-speaking background and non-English-speaking background workers may be functionally illiterate. While implementation of a nationally accredited training system for food processing has been relatively recent, the materials also emphasise the need to design resources to both assist the learner by building on existing skills and support the trainer in planning and delivery.

Stuart (1996) points out that various projects have looked at ways of improving the delivery of training to such diverse groups or have sought to design and implement needs-based literacy intervention programs prior to apprentices and trainees taking up their formal study. Such programs work on identifying students ELL-skill needs. For example, a guide was written to provide strategies for workplace and vocational trainers delivering core modules of the Certificate in Food Processing. These strategies focussed on customising and using training resources to particular workplace and learner-specific needs. Although resources are available to assist integration of relevant ELL skills in vocational courses—and it has been recognised that it is necessary to identify apprentices' and trainees' specific needs in these areas—there is little, if any, information available on the way these skills, or lack of them, impact on learning and performance in the workplace.

Patterson (1996) conducted research in four workplaces of which three involved employees in a module on Industrial Communications A and the other Quality Assurance A at ASF Level 1. Outcomes of the project showed that where self-paced print-based learning materials were the predominant mode of learning trainees with low literacy skills experienced difficulty. The need to identify employees' existing competencies was recognised for both the provision of assistance to those with literacy needs and also to ensure others did not waste time attending training sessions unnecessarily. However, the management of this aspect of training was viewed as difficult because of the range of differences in knowledge and experience which employees brought to the learning situation. It was emphasised that trainers needed to have a

range of strategies, including learner-coping strategies and strategies to develop language, to ensure employees' access to training.

Although there were no entry requirements for Certificates in Food Processing, it was concluded that the move from Level A to Level B demanded substantially more LLN skills. It was pointed out that 'if there is no language development for those who need it, there is a danger that trainees may not be able to access Level B modules. In effect the "no entry requirements" for the Certificates will become a barrier at Level B' (Patterson 1996, p.87). This research also draws attention to the need to ensure that assessment tasks involve ELL demands which are at the level being targeted by the training and not beyond. Outcomes for workplace ELL activities included writing operating procedures, work instructions and relevant supporting workplace labels—for example, machine parts, writing a code of behaviour, auditing and designing safety signs, using language relevant to meetings, quality control and workplace health and safety. From the management perspective, some employees were believed to have increased their involvement in the workplace as a result of the training.

Patterson (1996, p.33) lists a number of typical workplace skills. Language skills included the ability to understand and follow instructions, understand and use technical language, understand explanations, ask or answer questions, give feedback on what is not understood, and participate in training discussions. Literacy skills included the ability to read and understand written instructions, machine manuals, written explanations, diagrams, write answers to questions, and write information or explanations. Typical numeracy skills included the ability to understand and use mathematical language, give mathematical explanations, calculate, use calculators and estimate or measure length or distance.

In arguing for workplace training programs to reflect the language texts, contexts and skills of the workplace and acknowledging that change occurs over time, Prince (1992) argues against focussing on spelling and punctuation only, as does Cahill (1998). She states 'being literate involves mastering the conventionalised ways of making meanings with and around written text relevant to personal, social and occupational needs, rather than simply mastering grapho-phonic symbols and codes' (p.73). However, she stresses that all involved in the workplace-learning situation, besides language and literacy teachers, need to have an understanding of functional grammar to support effective work practices. Based on her reports on a selection of case studies of workplace language and literacy courses she identifies a number of factors which relate to the workplace context and the associated ELL demands. She identifies specific categories of workplace communication which regulate the nature of verbal interaction. Communication may be categorised as occurring either within one's own team, with another team or with someone outside the immediate work context—for example, a customer. Each of these categories may be explored in terms of the way it is influenced by the register variables of field, tenor and mode. Such exploration provides an insight into understanding and mapping key language and literacy tasks. In general, when applied to working within one's own team, tasks are likely to be at a lower level of difficulty, more routine, and repetitive and use predictable language about familiar things. Communications with supervisors, dealing with customers and attending meetings is rated more demanding because of the influence of power and status (tenor) involved.

On the issue of transition from school to work, Prince (1992) notes that in the past there has been an apparently low transferability of skills from school-type literacy to the ever-changing demands of the workplace. She cites research by Diehl and Mikulecky (1980) which tried to explain this on the basis of differences between academic reading tasks (reading to learn) and on-the-job reading tasks (reading to do). This research categorised on-the-job reading tasks across a wide range of occupations according to reading-to-learn, reading-to-do with no learning, reading-to-do with incidental learning, and reading to-assess. Sixty-three per cent of on-the-job reading was categorised as reading-to-do texts for which comprehension was strongly supported by the workplace context. Baylis, Caldwell and Nussbaum (1991) also identified a range of texts common across workplaces. Written texts specific to the textile, clothing and footwear industry included those required for performing the actual work, such as instructions and short reports, and those pertaining to workplace business in general, such

as notices, memos, time sheets and minutes of meetings. According to the findings of Joyce (1992), written texts typical of those involved in semi-skilled work include forms, messages, procedures, signs and diagrams. Prince (1992) examined the ELL demands across a range of jobs and concluded that in spite of similar texts being in operation, the task demand varied according to the purpose for reading, the amount of reading, and the extent of need to pay attention to detail. This research also showed that those employed in supervisory and professional positions spent more time reading-to-know compared with workers at the operational level. Those workers employed in trades, technical and professional occupations were required to read texts, such as journals, reference books and technical reports, think critically about them and relate the information to productivity and industrial issues.

Consideration also needs to be given to the ELL skills that underpin vocational education, as evident in the National Reporting System (NRS) which provides a comprehensive but complex framework for assessing and reporting employees' competence. This system includes the five skill areas of reading, writing, oral communication, learning strategies and numeracy. There are also six aspects of communication to consider: procedural, technical, personal, co-operative, systems and public. Oral communication considers vocabulary and grammar, discourse structure, phonology and graphology and meaning-making strategies. The Australian Language and Literacy Council (1996, p.71) advises writers to consider the following questions, in conjunction with an analysis of the specific industry needs and the NRS, as a basis for writing competency standards:

- Should there be any specific *units of ELL competency* for a particular level of work?
- Should current units of competence include any specific *elements of ELL competency*?
- Should elements within current units of competence include any specific *performance criteria related to ELL*?
- Should the range of variables or evidence guide for any of the competency standards include reference to ELL?

There are many resources available to support the integration of ELL skills into training (DEET 1993; Gibb, Keenan & Solomon 1996; Fitzpatrick & Roberts 1997; Wignall 1998) and other materials to address the literacy needs of Aboriginal and Torres Strait Islanders (DEET 1995b), the needs of persons with English as a second language (Mawer & Field 1995; DEETYA 1996) and dealing with cross-cultural communication (Street 1993). Other projects describe successful training strategies used in various industries (Rizzetti 1995) and evaluate the impact of WELL and report case studies in workplace literacy in various work situations (Hislop 1994; Wignall & Boyd 1994; Local Government and Shires Association of NSW 1997). There have also been projects to develop resources to assist trainers identify and train workers with ELL needs (Rainer & O'Dwyer 1992; McKenna, Wignall & Colvey 1998) and criteria for successful integration of these skills (Australian Language and Literacy Council 1996) and develop best practice in rural and remote delivery, including flexible delivery (Stephens 1991; Graham & Associates 1997; Millar & Falk 1999).

Review of the literature shows that employee ELL skills have a profound impact on workplace learning and performance. Where apprentices and trainees are perceived as having weak ELL skills there is likely to be a negative impact for both the employee and communication in the workplace context and in learning/training. First, if methods of intervention involve singling out employees for special tuition rather than using an integrated approach through standard training programs, these employees are likely to be stigmatised and not considered for career progression. Second, problems in workplace communications are likely to occur in relation to a range of activities, affecting both workers and managers. They are likely to involve all four macro skills, including problems associated with asking questions, understanding directions, misinterpreting messages, instructions and plans, completing records and forms, and lack of understanding of quality assurance and workplace health and safety requirements. Third, such employees are likely to find difficulty engaging with learning programs, particularly if the programs have heavy reading and writing demands—for example, self-paced print-based learning materials. Without ELL-skill development these employees would be unlikely to achieve and access a subsequent level of training. However, focussing only on traditional notions of literacy was seen as insufficient.

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Rather, the literature highlights the need for industry trainers to develop their skills to make training accessible for all workers. This does include ensuring trainers, employers and employees have an understanding of functional grammar to support effective work practices as well as increasing trainers' awareness of the way language, literacy and cross-cultural issues impact on workplace training, and developing techniques to identify and build on workers' existing skills.

The impact of learning and improving employees' ELL skills has been found to have a range of positive outcomes which extend beyond the specific four macro skills of speaking, listening, reading and writing. These outcomes include potential benefits for the business process and productivity as well as improvements in employees' ELL skills and well being. Improved ELL skills have been found to facilitate employees' participation in workplace communication and understanding of management and workplace health and safety issues. Employees have also improved in their level of self-confidence and self-esteem and ability to undertake skills training successfully as a result of ELL-skill development. From the business and employer perspective, ELL training may be necessary in some workplaces to ensure employees' understanding of, and participation in, workplace reform/change activities.

Examination of the ELL-skill areas which have been reported in the literature as being improved also provides an insight into the skill demands of workplace learning and performance. These ELL-skill demands include acquisition of an appropriate vocabulary, including mathematical and technical terms, the ability to spell and to write a range of workplace information related to the work context. ELL skills are also required to describe, discuss, explain, understand and critically think about a range of information depending on the job. Employees' ability to express their opinion, discuss and make suggestions, ask and answer questions, and give feedback on what they do not understand were also identified as workplace ELL demands.

Current policy and research findings argue that employees need to access the dominant discourse of the workplace to be successful and that training programs are best delivered through a practical workplace-based integrated approach which does not focus on a deficit model of conventional isolated literacy skills. The potential advantages of the current flexibility in approach to delivery of training, together with an increasing trend for VET courses to be delivered entirely on-the-job (Smith & Keating 1997), include greater apprentice/trainee motivation, more authentic learning experiences, more successful training outcomes, more opportunity to learn problem solving, and more practical understanding of the workplace business in terms of daily pressures and business operations. Alongside this is the implication that apprentices and trainees in this new system are likely to need to be more autonomous in the learning situation than ever before. It is likely they will need to be able to use computer technology, including internet and e-mail, and be more dependent on their ELL skills than ever before to engage fully with the learning and performance demands of the workplace.

Research design

Method

The research design and methodology took account of the need to examine the broad range of workplace outcomes which may be influenced by apprentices' and trainees' ELL skills, including aspects of functional literacy and interpersonal communication. The research was conducted in three main stages: literature review, consultation and survey item development, trial and administration of the survey and case study interviews. Stage one also included liaison with the Commonwealth Government Statistical Clearing House from whom permission needed to be obtained when surveying more than 50 businesses. The survey was confined to the State of Queensland, thus limiting generalisation of its result to only that State. The employers, apprentices and trainees surveyed came from the same group of businesses, but they were surveyed independently. Case study interviews were conducted in the States of Queensland, New South Wales and Victoria across a range of industries to provide supplementary data and allow some testing of the research items and issues interstate.

An informal reference group of stakeholders was also set up to assist with the survey's development, including development of survey items, and for consultation on the general approach to sample selection and contact with businesses. The literature review also provided information in terms of workplace ELL skills for developing the survey items. The items were designed to reflect the outcomes for learning and workplace performance which would depend on adequate ELL skills. A total of 106 items were subsequently filtered against NRS categories and following trial in a range of industry categories (building and construction, automotive mechanics, office administration, retail, education and health) resulted in a total of 47 items being selected for the survey. These items were presented in a traditional Likert scale format and were randomly ordered on the survey to avoid the potential for ordering effects in responses. The categories of teamwork, communication, reading writing, mathematics, technology and media, procedures, workplace understanding and workplace learning emerged from this process. Background data was also collected from respondents, along with open-ended questions on perceived strengths and needs of ELL skills. Two parallel surveys were used, one for employers and one for employees (copies appear in Appendix A). Employers were requested to focus on their experiences with apprentices and trainees during the past two years only to help ensure responses reflected the current New Apprenticeship system experience as far as possible, bearing in mind the context is still relatively new.

It was hypothesised that employers would be relatively positive about their apprentices' and trainees' ELL skills in the current environment of increased school retention rates, availability of pre-vocational courses, recruitment and selection processes, and access to information and learning. It was also hypothesised that apprentices and trainees would be more positive about their own ELL skills compared with the opinion of employers because the research focussed on their particular skills, as has been the trend in other opinion surveys (Ingram & O'Neill 1999; Education Queensland 1999).

Stage two consisted of data collection through interviews conducted at a range of workplaces. These sites were selected from employers who were advertising for apprentices and trainees during the research period. Follow-up interviews, both face-to-face and by telephone, were also conducted with volunteer survey respondents and other stakeholders involved with ELL

issues in the workplace. Interviews were informal and semi-structured and were based on the survey questions but sought to identify the practical experience of the workplace to supplement the survey opinion data and questions arising from data collection. Approval was sought and gained from the Commonwealth Government Statistical Clearing House to survey the businesses in accord with Federal Government policy. This methodology allowed for the triangulation of the perceptions of those stakeholder groups directly involved, compared with interview data collected in the actual workplace, and the outcomes of the literature review and other related documents.

Sample selection

A stratified simple random sample of 185 Queensland businesses/industries which were currently employing up to five apprentices and/or trainees was selected from the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) database of all Queensland businesses. Of these employers , employed apprentices (83) and 55% employed trainees (102) across a cross-section of industries proportional to popularity and taking account of gender differences in choice of industry. The apprentices and trainees were also randomly selected within each business. Employers and employees were contacted separately. Sample selection complied with the national standard for data collection in VET by using the standard classifications of industry and region. The sampling procedure was weighted for female and male popular industry choices and the overall proportion of apprentices to trainees (there are more trainees than apprentices in Queensland). This was supported by a scan of TAFE course offerings which reflected the various industry/business commonalities in course provision, emphases and specialities across the State. The focus was on smaller businesses and the 17–29 age group. Sites and persons for interview were selected on the basis of being able to contribute to the range of viewpoints impacting on literacy in the workplace across a range of industries. Survey respondents were provided with the opportunity to volunteer to participate in follow-up interviews.

Survey results

Employer sample

The overall response rate was 56%—43 employers of apprentices (52% of returns) and 60 employers of trainees (59% of returns). There was a fair representation of industry categories: automotive tradespersons (7), business and administration associate professionals (5), construction tradespersons (7), electrical and electronics tradespersons (1), elementary sales workers (3), factory labourers (2), food tradespersons (11), intermediate clerical workers (19), intermediate sales and related workers (5), intermediate service workers (10), mechanical and fabrication engineering tradespersons (12), other intermediate production and transport workers (2), other labourers and related workers (2), other tradespersons and related workers (12), road and rail transport drivers (2), science, engineering and related associate professionals (1) and skilled agricultural and horticultural workers (2). The only categories not represented in the responses to the survey were cleaners, farmers and farm managers, and intermediate machine operators. All but three employers of apprentices and five employers of trainees had two to three years or more experience in employing apprentices and/or trainees.

Apprentice sample

A total of 40 apprentices responded to the survey. While not all apprentices stated their trade, apprenticeships reported included cabinet-maker, carpenter, chef, diesel fitter, electrician, hairdresser, mechanic, panel beater and toolmaker. Courses in which apprentices reported being currently enrolled were at Certificate III level in furnishing, engineering, hairdressing and carpentry.

Of the apprentices, 40% reported being in their first year, with almost 25% in each of second and fourth year and 15% in their third year. Nineteen respondents were aged 15–19 years and 20 respondents aged 20–24 years, with one respondent identifying as aged between 25 and 29 years. All reported English to be the main language spoken at home. While 15% of respondents left school after completing Year 11, the remainder had completed Year 12, with approximately 33% reporting they had gained a qualification since leaving school. These courses included pre-vocational TAFE courses (5), a First Aid Certificate (1), a 2-year full-time School for Dressmaking course (1) and other unspecified certificate level courses (3). One was still at school in Year 12 and was an apprentice in the family business. These respondents may reflect the more literate apprentices of the sample, since 85% had completed at least Year 12 of schooling compared with the national figures for 1997 which reported just over 45% of apprentices and trainees had completed Year 12 (NCVER 1999a).

Trainee sample

A total of 53 trainees responded to the survey. While not all trainees stated the nature of their traineeship, those specified included travel consultant, administration officer, age care worker, trainee golf professional, horticulturer, soft furnishings machinist, storeperson, administration officer, warehouse person, nursing home aide, retail assistant and greenkeeper.

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Courses in which trainees reported being currently enrolled or having completed for their traineeship included Certificate II in Furnishing, Certificate II in Coaching and Accreditation, Certificate II in Office Administration, Certificate II Small Business Travel Agency Procedures, Certificate III for Storeperson, Certificate III Horticulture, Certificate III for Aged Care and Certificate IV Business Administration.

Just over 50% of the trainees reported being in their first year of training, with almost 33% in second year—the remaining respondents did not provide this information. Although not all trainees rated a category for age, the age range for trainees tended to be greater than for apprentices. Just over half of the trainees (53%) were aged between 15–19 years, with 13% identifying as aged 20–24 years. A further 17% of trainees rated the category for 25–29 years, with 15% aged 30–35 years and one trainee rating aged 40 years or over. All except one, whose home language was Finnish, reported English to be the main language spoken at home, although other data showed that some trainees came from other language backgrounds. While two trainees reported they had left school before completing Year 10, 32% had left school after completing Year 10, 7% after completing Year 11 and 45% had completed Year 12 (12% did not respond to this question).

Just over 50% of the trainees reported that they had completed some form of course since they left school. These courses included Certificate II in Office Administration, Certificate II Storeperson I and II, Certificate IV Business Administration, Certificate in Aged Care and Heavy Diesel Fitter apprenticeship. Three trainees reported overseas qualifications, including a Graduate of an Airforce Academy (Logistics), Graduate of a School of Management and Administration and a House Keeping Institute qualification.

Unlike the apprentice respondent group, school completion rates for the trainee respondent group closely reflect those of the general group of apprentices and trainees for 1997 (NCVER 1999a).

Comparison of opinion of employers, apprentices and trainees

Mean percentage positive ratings

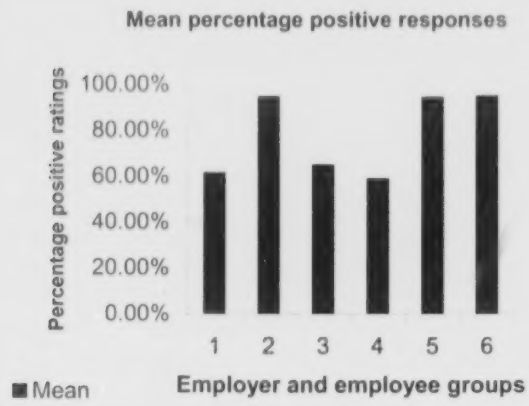
Figure 1 shows the mean percentage positive ratings for each group and subgroup surveyed. Employers' responses to the survey items were compared with those of employees (apprentices and trainees). In addition, the responses of employers of apprentices were compared with the responses of employers of trainees, and apprentices' responses were compared with those of trainees. *t*-tests for independent samples were used to test for significant differences (alpha levels set at 0.5). As predicted, employees were significantly more positive about the adequacy of their ELL skills than were employers ($p < .01$). Employers of apprentices were significantly more positive about the adequacy of apprentices' ELL skills than were employers of trainees ($p < .01$). However, there was no significant difference between apprentices' and trainees' responses to the survey items. Both employee groups were generally very positive about their ELL skills. The overall employer group and the two subgroups of employers of apprentices and employers of trainees, on average, were less positive than expected about their employees' ELL skills.

Employers' positive ratings for apprentices' skills to *Put workplace health and safety rules into practice* and *Read training materials* fell above the group mean compared with their ratings for trainees on these skills, whose employers placed them below the mean for their group. However, employer ratings for both apprentices and trainees fell below the mean for the respective groups for the adequacy of their skills to *Communicate effectively with customers*, *Deal with misunderstandings and problems*, *Write for study needs* and *Participate in off-the-job training needs*.

Both apprentices and trainees were rated least favourably for their ability to *Spell and punctuate their writing accurately*. In addition, both employee groups were rated relatively low on their ability to *Write for workplace learning needs* and *Interpret graphical information*.

Employer ratings showed apprentices and trainees to be most similar when it came to the ability to *Appreciate constructive criticism, Learn skills in the workplace, Complete workplace forms, Write for workplace learning needs, Understand workplace health and safety rules, Follow verbal directions* and *Understand times and dates*. Only in the case of skills to *Understand on-the-job-training needs* did employers provide relatively more positive ratings for trainees than apprentices.

Figure 1: Survey mean percentage positive ratings



Group	N	Mean	Group	N	Mean
1. All employers	103	61.32%	4. Employers of trainees	60	58.77%
2. All employees	93	94.53%	5. Apprentices	40	94.23%
3. Employers of apprentices	43	64.79%	6. Trainees	53	94.81%

The items where less than 50% of the employers gave positive ratings on the adequacy of apprentices' and trainees' ELL skills included the ability to *Read and understand plans and diagrams* (49%), *Understand and use technical language* (49%), *Pay attention to detail* (47%), *Write for study needs* (43%), *Prioritise their work* (42%), *Use study skills* (42%), *Write for workplace learning needs* (42%), *Identify the cause of problems* (38%), *Interpret graphical information* (36%) and *Spell and punctuate their writing accurately* (35%).

The vast majority of apprentices and trainees agreed or strongly agreed that their ELL skills were adequate to do almost all of the activities listed. The four activities which both employee groups rated least positively, although still much more positive than their employers' ratings, were *Interpret graphical information* (89%), *Write legibly* (74%), *Spell and punctuate my writing* (73%) and *Use computers as required* (56%).

The overwhelming positive responses of apprentices and trainees compared with employers suggest that these employees hold an extremely positive view of their achievements while in training. However, regardless of this apparently inflated view, comparison of employers' and employees' ratings shows that both groups were relatively least positive about the same activities, which are those rated lowest by apprentices and trainees (only 59% of employers agreed or strongly agreed that apprentices and trainees could *Use computer skills as required*).

In addition, while employers' ratings were more positive in relation to apprentices' skills than the skills of trainees, their responses did not differentiate for these four lowest rated items. However, trainees (64%) were more positive about their ability to *Use computers as required* than apprentices (46%), although this may reflect more opportunity for trainees to use

computers in terms of the different industry areas. Trainees (100%) were more positive about their ability to *Complete forms as required in the workplace* than apprentices (84%).

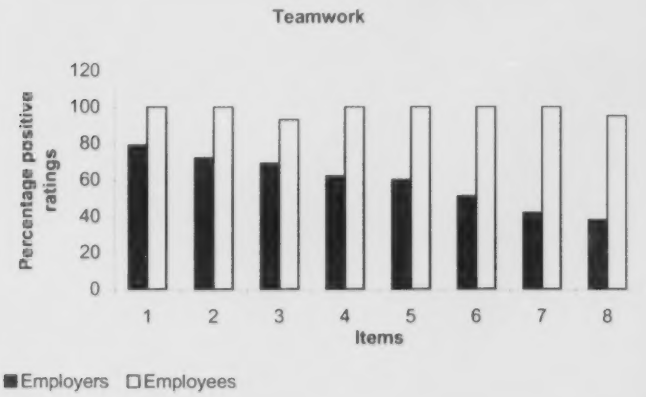
Only just over 50% of employers agreed or strongly agreed that apprentices' and trainees' skills were adequate to *Do basic mathematical calculations*, but employers of trainees (60%) were more positive about this skill than employers of apprentices (42%).

Employers were substantially less positive than apprentices and trainees for the following skills: *Write for workplace learning needs, Write for study needs, Use study skills, Interpret graphical information, Prioritise their/my work, Discuss what they/I do or do not understand* and *Deal with misunderstandings and problems.*

Teamwork

Several items on the survey related to activities which reflect teamwork. Figure 2 shows the percentage positive ratings of employers compared with those of their apprentices and trainees.

Figure 2: Percentage positive ratings for items on teamwork



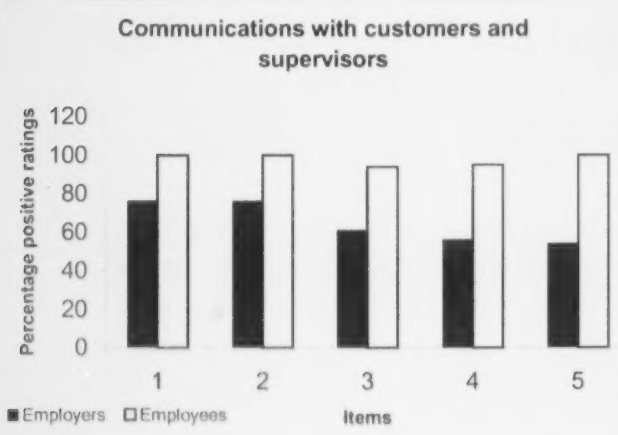
1. Communicate effectively with colleagues.
2. Work co-operatively in a team to achieve a common goal.
3. Give and take' to help achieve the team's goal.
4. Appreciate constructive criticism.
5. Take the viewpoint of others into account.
6. Take responsibility for own work.
7. Prioritise their/my work.
8. Identify the cause of problems.

Apprentices and trainees viewed their ability to undertake these activities extremely positively compared with employers. However, approximately 20% of employers neither disagreed nor agreed on these items, but the level of disagreement rated from 10% for *Work co-operatively in a team to achieve a common goal* and *'Give and take' to help achieve the team's goal* to 33% when it came to *Prioritise their work* and *Identify the cause of problems.* Apprentices and trainees held very similar opinions for these items, except there was much stronger agreement from trainees compared with apprentices to *Take responsibility for their own work* and *Take the viewpoint of others into account.* Similarly, employers' ratings were more strongly positive for trainees than apprentices for these items.

Communication with customers and supervisors

In addition to items related to skills underpinning the ability to work with colleagues in a team, other items focussed on skills required to communicate with customers and supervisors. Figure 3 shows the percentage positive ratings for these items.

Figure 3: Percentage positive ratings on items for communication with customers and supervisors



1. Show sensitivity to customer needs.
2. Listen to supervisors.
3. Communicate effectively with customers.
4. Communicate effectively with supervisors.
5. Deal with misunderstandings and problems.

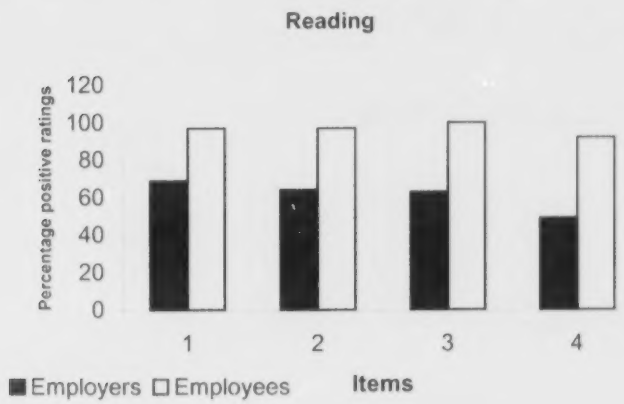
Employers gave relatively high positive ratings for apprentices and trainees having the skills to *Show sensitivity to customer needs* and *Listen to supervisors.* While they perceived employees' skills to *Communicate effectively with customers and supervisors* and *Deal with misunderstandings and problems* less positively, approximately 33% of responses rated neither agree or disagree on these two items. By contrast, apprentices and trainees were much more positive about their skills in these areas and gave particularly positive ratings regarding listening to their supervisors in keeping with employer ratings for this item.

Reading

Items which related to reading skills required in the workplace are shown in figure 4, along with employers', apprentices' and trainees' percentage positive ratings.

Although employer positive ratings for reading skill items were generally average, approximately 20% of employers of both apprentices and trainees disagreed that their employees had adequate skills to *Read to carry out their work duties* and *Read and understand plans, diagrams and visual materials.* This opinion with regard to the latter contrasted sharply with the opinion of apprentices who rated their strongest agreement that their skills were adequate to *Read and understand plans, diagrams and visual materials.*

Figure 4: Percentage positive ratings on items for reading

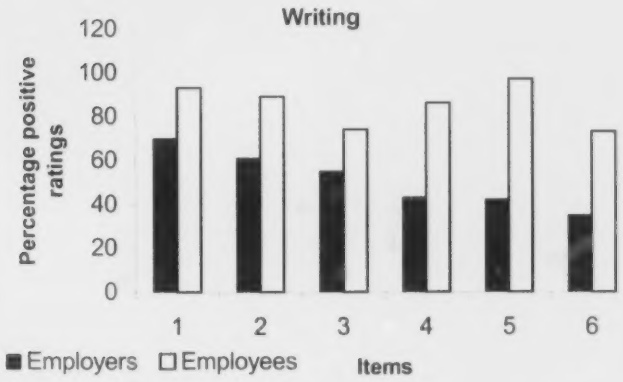


1. Read to carry out work duties.
2. Follow written instructions.
3. Read training materials.
4. Read and understand plans, diagrams and visual materials.

Writing

Items relating to writing skills required for workplace learning and performance are shown in figure 5, along with employers', apprentices' and trainees' percentage positive ratings.

Figure 5: Percentage positive ratings on items for writing



1. Complete forms as required in the workplace.
2. Write for workplace needs, e.g. notes, messages, letters.
3. Write legibly.
4. Write for study needs.
5. Write for workplace learning needs.
6. Spell and punctuate their writing accurately.

Employers were relatively positive about the adequacy of apprentices' and trainees' skills to *Complete forms as required in the workplace* compared with the other writing activities, although there was an element of disagreement for all writing activities. Approximately 15% of employers disagreed that apprentices and trainees had adequate ELL skills to *Complete forms as required in the workplace, Write for workplace needs, e.g. notes, messages, letters* and *Write legibly.*

While apprentices and trainees rated themselves relatively highly for these activities, they were less confident about their ability to *Write legibly*. This was one of the three items for which almost 25% of both apprentices and trainees rated neither agree nor disagree and almost 10% of trainees disagreed. In addition, 10% more employers of apprentices than trainees disagreed apprentices' skills were adequate for writing legibly.

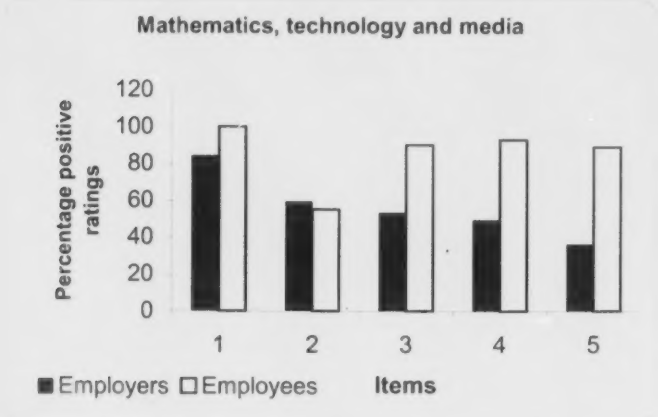
Similarly, just over 25% of employers disagreed that apprentices and trainees had adequate skills to either *Write for study needs* or *Write for workplace learning needs*. More employers of trainees than apprentices disagreed that their employees had adequate skills to *Write for study needs*. In contrast to employer opinion, over half of apprentices and trainees strongly agreed on the adequacy of their skills for these activities, with the remainder agreeing.

Both employers and employees were least positive about the skill to *Spell and punctuate writing accurately* relative to their other ratings. More employers disagreed about the adequacy of employees' skills to do this activity than any other on the survey (35%). Within the positive context of employees' responses, both apprentices and trainees also provided their lowest rating of any activity for the adequacy of their ELL skills to *Use computers as required*, with almost 30% of trainees rating 'disagree'. Similarly, a relatively large proportion of trainees (21%) disagreed about their skills to *Spell and punctuate their writing accurately* compared with apprentices.

Mathematics, technology and media

The survey also included items related to skills to calculate, use computers, understand technical language and interpret graphs and other visual materials. Figure 6 shows the percentage positive ratings for these items for employers and their apprentices and trainees.

Figure 6: Percentage positive ratings on items for mathematics, technology and media



1. Understand visual communication, e.g. signs, pictures, advertising material.
2. Use computers as required.
3. Do basic mathematical calculations (with or without a calculator).
4. Understand and use technical language.
5. Interpret graphical information.

Employers had one of the highest levels of agreement on apprentices' and trainees' skills to *Understand visual communication, e.g. signs, pictures, advertising material*, although 12% of employers of apprentices disagreed. Similarly, the majority of both apprentices and trainees showed one of their strongest levels of agreement for their skills in this area. As noted earlier, the skill to *Use computers as required* received most disagreement from employers (27%) and the lowest rating of agreement of all the skills from apprentices and trainees (56%). In

addition, 37% of employers of trainees disagreed their employees' skills were adequate to *Use computers as required*. While approximately 50% of apprentices neither disagreed nor agreed on their computer skills, almost 10% of apprentices and almost 33% of trainees rated their computer skills as inadequate.

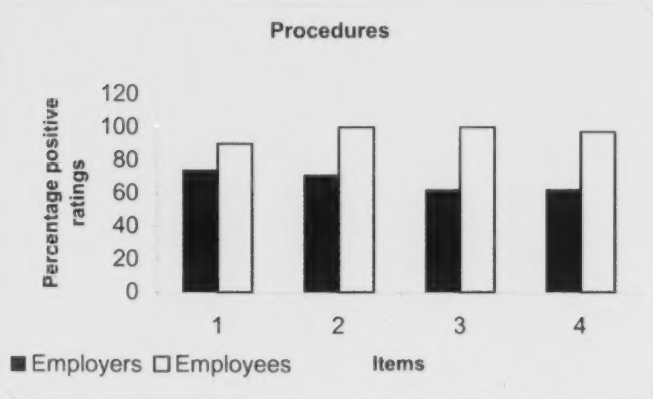
Employers also gave relatively low ratings for the adequacy of apprentices' and trainees' skills to *Do basic mathematical calculations (with or without a calculator)* and *Interpret graphical information*, with over 20% showing disagreement. However, a substantial proportion of employers neither agreed nor disagreed with regard to interpreting graphical information. Employers of trainees were also more positive than employers of apprentices on employees' adequacy to *Do basic mathematical calculations*. Trainees were also more positive about their skills in this area than apprentices.

While apprentices were relatively positive about their skills to *Understand and use technical language*, almost 15% of trainees neither agreed nor disagreed. In addition, employers gave relatively less positive ratings, with slightly over 10% disagreeing and a substantial proportion neither agreeing nor disagreeing.

Procedural activities

Four of the survey items related to procedural activities commonly undertaken in the workplace. Figure 7 shows employers' and apprentices' and trainees' percentage positive ratings for these items.

Figure 7: Percentage positive ratings on items for following procedures



1. Take telephone messages accurately.
2. Follow verbal directions.
3. Carry out sequences of activities.
4. Put workplace health and safety rules into practice.

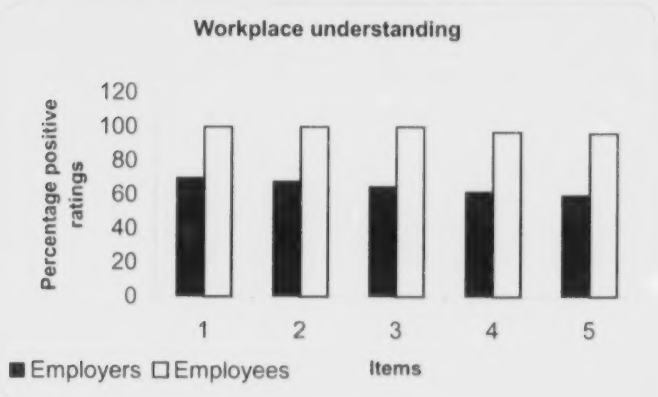
The majority of employers agreed that both apprentices and trainees had adequate skills to *Take telephone messages accurately* and *Follow verbal directions*, although approximately 10% disagreed for each group. The more positive responses of employees showed more than 50% of apprentices and close to 80% of trainees strongly agreed they had the skills to do these activities. Carrying out sequences of activities effectively and putting workplace health and safety rules into practice attracted an average rating from employers, with almost 33% neither agreeing nor disagreeing. In addition, close to 10% of employers disagreed on the adequacy of these skills, in contrast to the apprentices and trainees who provided almost all positive ratings—with trainees showing close to 80% strong agreement.

This is one of the few areas where positive ratings are above the mean for both groups with the exception of apprentices' and trainees' ratings on the adequacy of their skills to *Take telephone messages accurately*.

Workplace understanding

Items which focussed on employees' understanding of the workplace appear in figure 8. These items relate to the required duties, workplace processes and products, health and safety and understanding instructional materials and workplace concepts and issues. Figure 8 shows the percentage positive ratings for these items.

Figure 8: Percentage positive ratings on items for workplace understanding



1. Perform workplace duties.
2. Understand workplace processes and products.
3. Understand instructional guides and manuals.
4. Understand workplace health and safety rules.
5. Understand key concepts and issues in the workplace.

Employers, apprentices and trainees were relatively positive about the adequacy of employees' ELL skills to *Perform workplace duties*. There was minimal disagreement amongst employers, with employers of apprentices being substantially more positive than employers of trainees. Apprentices and trainees were equally highly confident of their skills to *Perform workplace duties*.

Apprentices' and trainees' ability to *Understand workplace processes and products* and *Understand instructional guides and manuals* received above average agreement from employers. Similar ratings were made for both these skills, with close to 10% disagreeing. Apprentices' responses to these items was also very positive, with trainees showing substantially more strong agreement for their understanding of workplace processes and products.

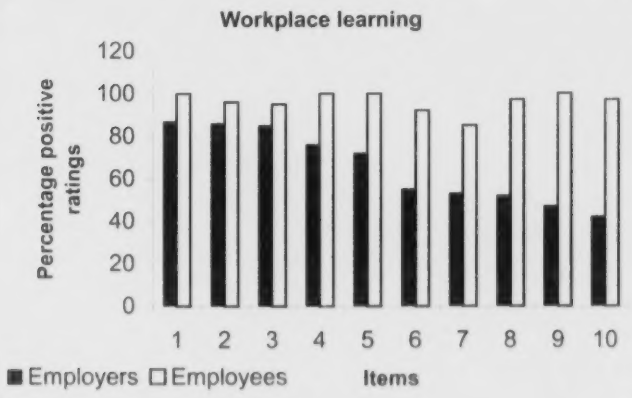
Employers' level of agreement regarding the adequacy of apprentices' and trainees' skills to *Understand key concepts and issues in the workplace* and ability to *Understand workplace health and safety rules* was reasonably positive, close to their average rating for the survey items. However, close to 10% of employers disagreed, yet the majority of apprentices and trainees strongly agreed on the adequacy of their skills to carry out these activities.

Ratings for putting workplace heath and safety rules into practice were similar to those for understanding workplace health and safety rules. All of the ratings for workplace understanding were above the respective group mean except for employers' ratings on the adequacy of employees' skills to *Understand key concepts and issues in the workplace*. This view is in keeping with several employers' comments.

Workplace learning

In addition to items related to skills for understanding the workplace, other items related to activities commonly undertaken by apprentices and trainees as part of learning during the apprenticeship or traineeship. Figure 9 shows the percentage positive ratings for these items.

Figure 9: Percentage positive ratings on items for workplace learning



1. Learn skills in the workplace.
2. Understand times and dates.
3. Participate in training discussions.
4. Find information.
5. Understand on-the-job-training needs.
6. Begin learning in the workplace.
7. Participate in off-the-job-training needs.
8. Discuss what they/I do or do not understand.
9. Pay attention to detail.
10. Use study skills.

Out of all of the activities listed in the survey employers gave the most positive ratings for apprentices' and trainees' skills to *Learn skills in the workplace, Understand times and dates* and *Participate in training discussions*. The level of disagreement was minimal except for 14% of employers who disagreed about adequacy of skills to *Participate in training discussions*. In particular, employers were slightly less positive with respect to trainees' skills in this area. Apprentices and trainees were also very positive about their skills in these areas, with trainees showing their strongest agreement with the adequacy of their skills to *Understand times and dates*.

Employers and apprentices and trainees also rated the adequacy of skills to *Find information* and *Understand on-the-job-training needs* relatively highly. However, while employers were less favourable towards trainees' skills to *Find information*, trainees showed much stronger agreement for this skill than most other skills.

Apprentices and trainees consistently provided positive ratings on the adequacy of their ELL skills to *Discuss what they/I do or do not understand, Pay attention to detail* and *Use study skills effectively*, with trainees agreeing more strongly.

Employers' ratings contrasted with those of employees for these skills. Almost 33% of employers disagreed that apprentices and trainees paid adequate attention to detail, with almost 40% of employers of trainees disagreeing. In addition, approximately 20% of employers disagreed that apprentices and trainees had adequate skills to *Discuss what they/I do or do not understand* and *Use study skills effectively*. The fact that approximately 40% of employers neither agreed nor disagreed on employees' ability to *Use study skills effectively* suggests that many employers may not have this kind of knowledge about their apprentices and trainees.

Of further interest is the contrast between employers' ratings for some of these items. While they were strongly positive about employees' skills to learn in the workplace (87%), they were not so positive about their skills to begin learning in the workplace (55%). Similarly, they viewed employees as having adequate skills to *Participate in training discussions* (85%) but not to discuss what they did or did not understand (52%) (a potentially more threatening situation for employees). In addition, employers were reasonably positive about employees' skills to *Understand on-the-job-training needs* (72%) but not so positive about their skills to *Participate in off-the-job-training needs* (53%).

Comparison of employer opinion across three industry categories

Employer mean percentage positive ratings were explored further to determine if opinion differed between industries. (It was not advisable to carry out a similar analysis for apprentices and trainees in view of the large proportion of positive ratings.) Since stratification of the original sample took into account all 20 industry categories and the proportion of businesses with apprentices and trainees within each category, the number of respondents for most categories was too small to be used as a basis for comparison between categories. Three industry categories were selected on the basis of having the greater number of respondents, though still relatively small. These categories, as would be expected, are reflective of industries with the most apprentices and trainees but also allow for some contrast between industry areas and jobs. The categories, number of respondents and group response rate were Intermediate clerical workers (19 almost 61% response rate), Mechanical and fabrication engineering tradespersons (12 – 85% response rate) and Other tradespersons and related workers (e.g. hairdressing 12 – almost 43% response rate).

Mean positive response ratings were calculated for each set of items for each of the six employer groups comprising of the overall group of employers, employers of apprentices, employers of trainees, employers in the Intermediate clerical workers category, employers in the Mechanical and fabrication engineering tradespersons category and employers in the Other tradespersons and related category. These mean positive response ratings are reported in table 1 and presented graphically in figures 10 to 17. It also needs to be acknowledged that the numbers of items in the activity sets are relatively small, particularly for Reading (4) and Procedures (4), with five items for each of the activity sets Communication with customers and supervisors, Mathematics, technology and media and Workplace understanding. Six items contributed to Writing skills, eight items for Teamwork and ten items for Workplace learning.

This breakdown shows that employers of apprentices were more positive about their employees' ELL skills for all activity sets except communication which differed by only 1% from the overall group and the group of employers of trainees.

Table 1: Mean percentage positive ratings for employer groups

Activity	Group 1. All Employers (Es)	Group 2. Es of Apprentices	Group 3. Es of Trainees	Group 4. Es of Intermediate clerical workers	Group 5. Es of Mechanical Fabrication Engineering tradespersons	Group 6. Es of Other trades-persons and related workers
Teamwork	59.1	63.5	55.8	46.7	54.2	36.5
Communication	64.6	64.2	65.2	57.9	50.0	45.0
Reading	61.3	69.5	55.0	48.7	47.9	39.6
Writing	51.0	53.3	48.8	48.3	51.4	23.6
Maths, tech., media	56.2	57.4	54.9	57.9	48.3	36.7
Procedures	67.3	70.8	64.3	61.9	52.1	50.0
Understanding	66.0	73.8	62.8	56.8	63.3	58.3
Learning	65.5	67.9	63.2	55.8	55.0	45.0

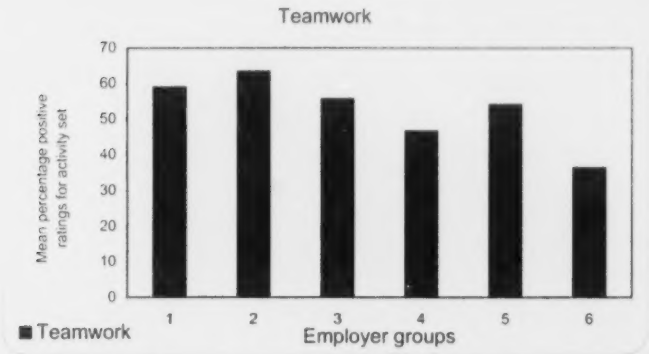
Es = employers

Employers in the three industry category groups provided less positive ratings compared with the employer group as a whole and the groups of employers of apprentices and employers of trainees except for three activity sets. Writing skills for Mechanical and fabrication engineering employees and Intermediate clerical workers were rated on a par with the overall group of employers and employers of trainees respectively, but ratings by employers of the Other tradespersons group were much less positive. Employers of Intermediate clerical workers also rated these employees' ability to *Spell and punctuate writing accurately* much more positively than any other employer group (58%). In the case of Mathematics, technology and media, ratings by employers of Intermediate clerical workers were the same as ratings by the overall group of employers and employers of apprentices, compared with much less positive ratings by employers of Other tradespersons and related workers. With regard to the Workplace understanding activity set employers of apprentices were most positive, with employers of Mechanical and fabrication engineering tradespersons also providing ratings on a par with the overall employer group. Of additional interest is the fact that employers of Mechanical and fabrication engineering tradespersons rated the skills of their employees' above the average of the overall group and all other subgroups for being able to *Perform workplace duties* (92%), *Understand visual communication, e.g. signs, pictures, advertising material* (92%), *Appreciate constructive criticism* (92%), *Understand and use technical language* (75%) and *Complete forms as required in the workplace* (75%).

Comparison of the mean percentage positive ratings for the three industry category groups also shows that for Communication, Reading, Mathematics, technology and media, Procedures and Workplace learning, employers of Intermediate clerical workers were most positive, followed by employers of Mechanical and fabrication engineering tradespersons, with employers of Other tradespersons and related workers being least positive of all. For this latter group, employers' mean percentage positive ratings were below 50% for all activity sets except Procedures and Workplace understanding. However, examination of individual items shows wide variation for this group. These employers were 100% positive with respect to two items, their employees' ability to *Put workplace health and safety rules into practice* and *Understand times and dates*. The ratings were more positive than average for all groups in relation to their employees' ability to *Understand workplace processes and products* (92%), *Participate in training discussions* (75%), *Communicate effectively with colleagues* (75%), *Communicate effectively with supervisors* (67%), *Learn skills in the workplace* (67%) and *Understand on-the-job-training needs* (67%). While their ratings for these employees with regard to the ability to spell and punctuate writing was close to the overall group (33%), the following items were rated much less positively for this group: *Do basic mathematical calculations, with or*

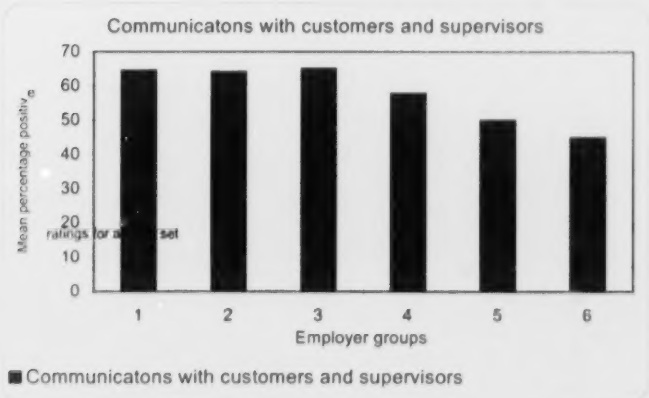
without a calculator (17%), *Prioritise their work* (17%), *Take responsibility for own work* (17%) and *Pay attention to detail* (17%). However, the differences for this group should be treated with caution in view of the small number of respondents and the low response rate for this category.

Figure 10: Employer groups mean percentage positive ratings for Teamwork items



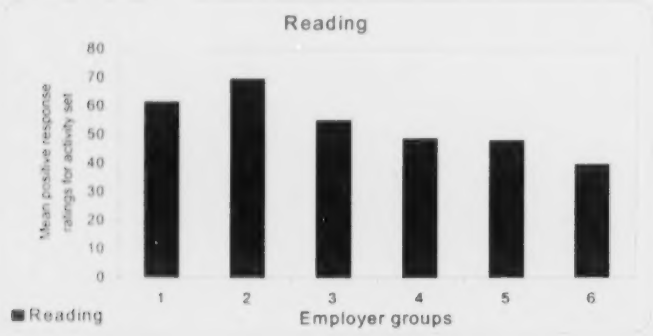
Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 11: Employer groups mean percentage positive ratings for Communication with customers and supervisors



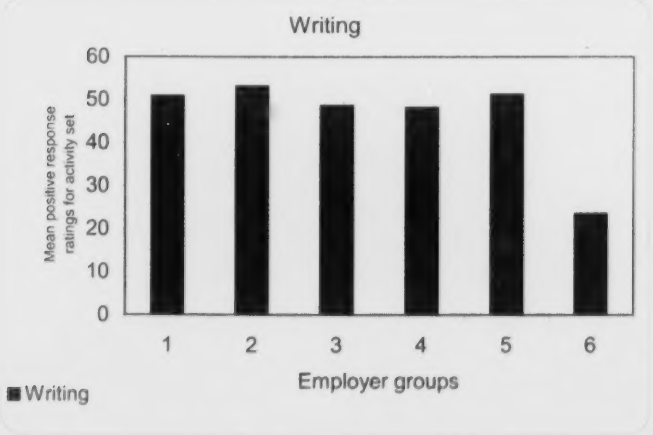
Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 12: Employer groups mean percentage positive ratings for Reading



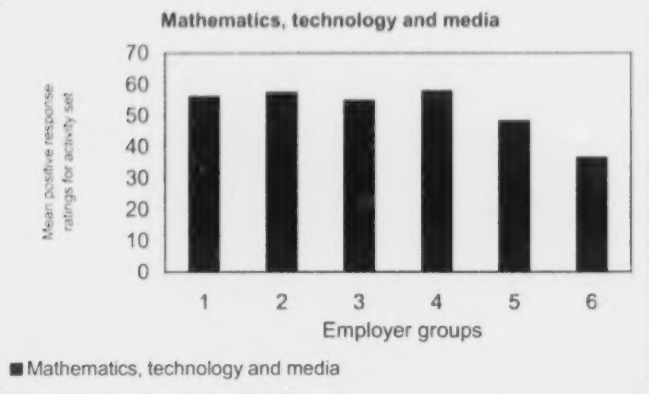
Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 13: Employer groups mean percentage positive ratings for Writing



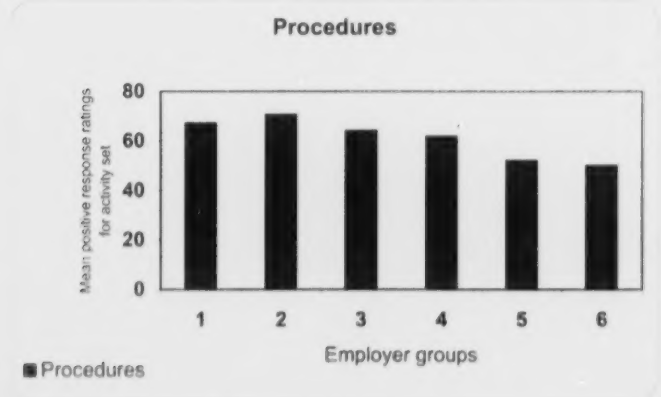
Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 14: Employer groups mean percentage positive ratings for Mathematics, technology and media



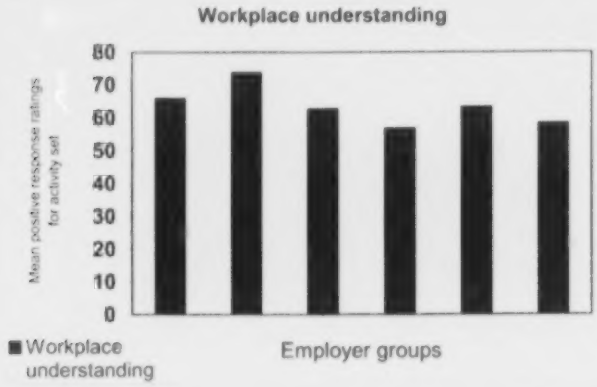
Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 15: Employer groups mean percentage positive ratings for Procedures



Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 16: Employer groups mean percentage positive ratings for Workplace understanding



Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Figure 17: Employer groups mean percentage positive ratings for Workplace learning

Group 1. All Employers
Group 2. Employers of Apprentices
Group 3. Employers of Trainees
Group 4. Employers of Intermediate clerical workers
Group 5. Employers of Mechanical and fabrication engineering tradespersons
Group 6. Employers of Other tradespersons and related workers

Comments of employers

Employers' comments on ways apprentices' and trainees' literacy skills assist most in their business

Employers' comments reflected a strong opinion that their apprentices needed to have adequate ELL skills to carry out their workplace duties. They viewed these skills as essential to the conduct of their business and for apprentices to be able to contribute to customer service. These employers reported that their apprentices played an important role in communicating with customers and colleagues to complete a task, dealing with customers on the telephone, understanding delivery invoices, reading and writing internal and external correspondences, filling in forms, reading drawings and understanding instructions, reading general information on products, processing source documents and understanding reports, and understanding recipes, weights and measures.

They reported that 'basic skills' or 'literacy skills' and good communications skills were essential to all aspects of the work. The skills of the apprentice were stated to be a 'life saver' in the building industry by one employer. For apprentices to bring adequate literacy skills to the workplace was also viewed as very important because they were seen as an important foundation for learning on the job, 'making them easier to teach so they can cope with jobs on their own'. Literacy skills were also seen as making an important contribution to apprentices' self-esteem and increasing their opportunities in the workforce. They were also viewed as necessary for apprentices to perform their duties competently and cost effectively and to ensure they could be trained in all aspects of the business so that a company may benefit.

Employers' comments stressed that trainees' literacy skills were essential to providing valuable assistance to the particular business. This assistance took the form of 'overall customer and colleague communication', communicating with customers, supervisors and trainers, taking messages, letter writing, follow instructions correctly the first time and communicating information to the public in a way that the public can understand. Trainees' ELL skills were viewed as making a contribution towards saving time. This was because a skilled trainee was able to undertake some work independently such that everything they wrote did not have to be checked. Their work was also seen as assisting the work of other employees, helping to keep things running smoothly and, so, saving time and, ultimately, money.

The importance of acquiring knowledge about the business was highlighted by 15% of employers of trainees who were of the opinion that because a traineeship activated the training process, it allowed the trainee to gain valuable experience while assisting in the basic administrative functions of a business. Such arrangements were seen as allowing time for complex issues to be examined. ELL skills were also viewed as making an important contribution to trainees' ability to understand a range of customer problems and deal with them satisfactorily by 15% of their employers. These skills were also seen as important for trainees to be able to adapt to the particular workplace context. For instance, a trainee in a school situation had to be able to assist young children in literacy development and communicate with parents, whereas in the case of a storeperson the trainee needed to be able to take orders accurately and identify and order parts to do the job. Similarly, ELL skills were seen as important for interpreting technical data and understanding technical aspects of the particular business' theory and practice and for being able to adopt the perspective of that particular business.

Literacy skills were seen as being able to provide the trainee with the ability to read instructions, manuals, study materials and to effectively understand and implement this information in both work and study. Tasks listed as depending on trainees' ELL skills were listed as writing notes, reading street signs, understanding procedures, building strong

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professional written rapport with customers, communicating clearly on internal matters, and documenting and recording information accurately.

The importance of ELL skills to the ability of a trainee to present the business to the public and/or to project the 'business image' was also raised by almost 25% of employers. For instance, high level skills were viewed as essential for a trainee in the child care profession because of the oral and written communication skills involved in communicating with parents and children.

Almost 12% of employers noted the importance of trainees being able to take the initiative and get on with the job as well as learn on the job. This was seen as important for both learning and performance. For example, one employer noted the importance of completing and following up on work orders to carry out the job efficiently. This aspect of the work was seen as being often overlooked in the training process. Another employer noted that trainees' literacy skills impacted on their ability to understand and interpret technical information and to grasp how such information contributes to achieving the particular competencies in question. 'Good literacy skills' were also noted as essential if trainees wanted to progress in the workplace by almost 30% of employers.

Employers' comments on ways apprentices' and trainees' literacy skills need to be improved to enhance workplace learning and performance in their business

Employers' were asked in what ways their employees' literacy skills needed to be improved to enhance workplace learning and performance in their business. Almost 40% of employers of apprentices' concerns related to the need to improve spelling, punctuation, vocabulary, grammar and sentence structure. Employers also had the opportunity to provide additional comments. While most employers of apprentices (60%) did not provide additional comments, those who did emphasised the importance of apprentices needing to be competent with these language features and also to be able to write legibly. Writing skills were seen as extremely important because the resulting information typically contributes to effective internal workplace communications, general business operations, keeping records as well as external communications with customer, and ultimately customer service. The accurate and legible presentation of written texts was viewed as of great importance because it reflects the overall business image—for example, spelling in hand-written quotes and inspection reports provided to customers. It was emphasised that such records needed to be accurate and a true reflection of the particular work transaction. The major reason for this was the potential for such documents to have some impact in law—for example, customer complaints, and goods and services returns. Three employers of apprentices reported that their employees' use of 'phonetic' spelling was of major concern, with two employers noting that there was a tendency to rely upon the word processor for spelling and punctuation. Basic spelling and punctuation knowledge was seen as necessary regardless of access to word-processing spell-check. Just over 25% of these employers also reported that apprentices' reading and listening skills and their ability to concentrate were in need of improvement, particularly with regard to listening to instructions, following instructions and note taking. Employers' (15%) comments also highlighted the importance of critical-thinking skills in relation to workplace learning and performance. The importance of recognising when one doesn't understand what one has read was emphasised as a skill which may need to be developed in training, along with the ability to ask questions and deal with misunderstandings and problems.

While 25% of employers pointed out that apprentices needed to improve their understanding of the terminology of the relevant business, methods and functions, they also commented on the need for improved mathematical skills in terms of 'basic arithmetic skills' and 'adding in the head'. One employer highlighted the need for apprentices to have a greater general knowledge to bring to the workplace and to be more committed to improving their literacy skills. Another employer noted that the company was generally happy with its own apprentices, although improvements in spelling, punctuation, and grammar would help. This employer also stated that in the experience of recruiting apprentices, many applicants appeared to be lacking in 'basic literacy skills'. In other comments, one employer

recommended the use of more written exercises for assessment for apprentices during both their work experience and training program.

Although the comments of 30% of employers of trainees reflected a view that their trainees' 'basic literacy skills' were adequate, they identified a need for skills in the technical field with respect to using computers and terminology peculiar to the particular industry area. These comments reflect the low positive response ratings employers of trainees gave to using computers as required and interpreting graphical information. However, almost 33% of these employers were of the opinion that these skills would develop over time in the job, while one employer believed that mature age trainees were more competent than younger persons because of their maturity. A further 25% of these employers justified the adequacy of their trainees' ELL skills on the basis of the recruitment and selection process. One employer noted that this 'ensured adequate literacy skills'. However, another employer noted that the type of trainee employed by his/her particular industry had limited education, such that it would be difficult for them to advance in the employment situation. Lack of literacy skills was noted as an impediment to progressing in the job to a higher level of work by three employers of trainees and two employers of apprentices.

Two employers of apprentices and three employers of trainees described their employees as not being able to spell accurately and construct written communications effectively for workplace needs. Some employers also noted that hand-writing skills needed to be improved to a legible standard. Lack of these skills was seen as detracting from the professional image the employer wished to project for the business and at the same time contributing to these employees' low self-esteem. Literacy skills were noted as providing a foundation for both workplace learning and performance by six employers of apprentices and five employers of trainees. One employer noted that if trainees could not confidently write for workplace and study/learning needs, they would not be sufficiently confident to undertake further self-development and learning. The ability to read well was also seen as providing a good foundation for workplace learning. Three of these employers implied that the onus was on the trainee to improve his or her literacy skills—one employer stating that such trainees 'need to obtain learning materials to assist them to improve'. The ability to calculate was also raised as an area in need of improvement, as were the areas of public speaking for customer product delivery, how to find information, how to think and how to evaluate by approximately 5% of each group of employers.

Besides focussing on spelling, punctuation, grammar, sentence structure and the ability to identify and correct spelling errors, approximately 20% of employers also identified a range of other aspects of workplace learning and performance as being in need of improvement. These related to comprehending written instructions, skills to structure written information, formal letter-writing and report-writing skills, study skills and communication skills to communicate with supervisors. One of these employers also requested that emphasis be placed on recording and following written data, with the ability to ask and answer questions, and provide reasons. A further five employers of apprentices and four employers of trainees noted a need for improvements in skills related to the operations of their business. The need to improve self-organisational skills and understand how and why workplace activities contribute to assuring quality was a common theme. Apprentices' and trainees' acquisition of these skills and understandings was viewed as very important to ensuring business success, as was their ability to appreciate how their role and responsibilities related to business operations. This issue was seen as impacting on employees' ability to understand the consequences of their actions in the workplace. Employees were seen as needing to improve their understanding of the consequences of their work duties for the business as a whole.

Ten per cent of employers (three employers of apprentices and seven employers of trainees) also expressed concern about the transition from school to work. They were concerned that the education system appeared not to be able to prepare trainees for the workplace. They highlighted the importance of the apprenticeship or traineeship as the apprentices'/trainees' first experience in the workforce. Comments included:

In most trainees I've looked after, there has been a lack of maturity. Usually just out of school, they don't take criticism well and believe they are being picked on. They also don't believe the importance of 'the client' and the relationship you need to build to promote good customer relations.

The education system does not prepare young Australians with the communication and mathematical skills for full functionality in this business or business in general.

The education system needs to be restructured at all levels in order to maximise the skills and strengths of all Australians. If young people can read and write properly they are then able to learn and/or pursue other goals and abilities in life.

Completion of a pre-vocational course was perceived as a good way of eleviating this problem by two employers of apprentices who, along with three employers of trainees, did not expect skills such as organisational skills to be fully developed by young people on uptake of a traineeship or apprenticeship. These skills were seen as developing with age and experience.

Comments of apprentices and trainees

On-the-job-training activities

The scope of 'on the job training' activities reported by apprentices included: attendance at talks, demonstrations, courses on how to operate workplace machinery, reading manuals, specific training courses, hands-on experience, following verbal instructions, self-training, performing tasks under close supervision of a qualified colleague, completing workbooks, watching others to observe and practise skills, ordering parts from parts books, attending apprentice meetings, carrying out routine tasks, following instructions and asking questions.

A summary of trainees' 'on the job training' activities included: administration and accounts, making inbound travel reservations and bookings, answering the telephone, charging invoices, receipting cheques, attending lectures, reading manuals, handling golf club repairs, golf coaching, making sales and marketing. In addition, some trainees reported attending a course once a week, driving a forklift, reading packing slips, receiving stock, attending meetings, preparing reports, managing finances, attending training session, watching demonstrations, answering questions and completing a workbook. The experience of 'doing the job' was also noted as on-the-job training.

Perceived strengths in literacy

Fifteen per cent of apprentices described the ELL skills with which they were most happy. Their comments were brief. Three apprentices perceived their strengths to be in the areas of study skills, report writing and communication with customers. Seven apprentices referred to being competent with respect to the items listed in the survey, with three highlighting their ability to communicate with colleagues and customers and two focussing on their ability to learn skills in the workplace. Other perceived strengths included speaking skills, the ability to record information accurately, to write, to locate information and to explain things to customers in simple terms.

Twenty per cent of trainees described ELL skills with which they were most happy. A quarter of these trainees noted that they were equally or reasonably happy with all their language and literacy skills, with one stating that 'nothing in particular came to mind'. Oral and written communication skills were noted as strengths by 50% of these respondents, with one trainee highlighting the ability to write with expression and another focussing on the ability to use technical terms related to the job. Three trainees emphasised their ability in speaking as a strength and two trainees highlighted their ability to read.

Perceived literacy needs

In spite of apprentices' and trainees' extremely positive ratings of their ELL skills compared with employer ratings for the survey items, their comments provided evidence that they did perceive some need for improvement. Thirteen apprentices (almost 33%) responded to the request for information on which of their English skills they would like to improve to help with work and study. The areas identified reflected their lower ratings on the survey. Responses included the need to improve in spelling, punctuation, writing in general, essay writing, reading effectively/reading comprehension, and public speaking. These apprentices also referred to other aspects of workplace learning and performance, including vocabulary development, ability to discuss and seek clarification, and the relationship between their ELL skills and the demands of their particular job. One apprentice stated 'as I adjust to and learn more technical terms of my industry it will assist my understanding of the literature within my industry'. A second apprentice noted the need to focus on being able to discuss what he/she did or did not understand (an item from the survey). A third apprentice stated that 'my English level exceeds the requirements of my job', with a fourth expressing concern that his/her writing skills may deteriorate: 'with my trade there is not a lot of written English. I feel as though I could lose touch with my English skills as time goes on' (apprentice panel beater who completed Year 12). The issue of learning by correspondence was raised by a fifth apprentice who was concerned about the learning materials. This apprentice stated 'some of the learning material is very unstructured. Because I'm doing block training by correspondence some material is difficult to understand due to the material being designed to be read in the company of an instructor'.

Ten per cent of trainees identified skills which they needed to improve to help with work and study. Although in keeping with their very positive response when rating their ELL skills in the survey, the areas identified for improvement reflected their lower ratings for the survey items. As with apprentices, the need for improvement included writing and spelling, including sentence structure and writing letters in particular, as well as setting out of reports and understanding plans. Reading skills and academic skills were also highlighted by three trainees, with one trainee commenting 'its not that I can't read, I just don't really enjoy it' and 'I need more time'.

Case study interviews

Scope

Case study interviews comprised visits to seven workplaces across three States (Queensland 3, New South Wales 2 and Victoria 2), focussing on apprentices and trainees in hospitality, office administration, engineering, automotive and building construction. Consultations with a range of stakeholders and telephone interviews with volunteer survey respondents were also undertaken to further illuminate the survey data and examine how the processes involved in the operations of the New Apprenticeship system related to the learning and performance demands faced by the apprentice and trainee. Workplace visits and opportunities for interviews depended on the goodwill of employers and employees to give their time, each one differing in accord with the nature of the particular business.

Delivery of training

A substantial amount of information and resources are available to assist with ELL needs of training in all aspects of VET. Literacy consultants employed in the Department of Employment, Training and Industrial Relations (DETIR) are also closely involved in dealing with apprentices' and trainees' needs in the area of LLN. In Queensland, guidelines are available (DETIR 2000) to assist training providers in meeting the literacy and numeracy needs of apprentices and trainees. They illustrate how the LLN skills required by a particular job may be identified and what conditions contribute to the level of difficulty in accord with the NRS. They also contain a procedural flow chart to demonstrate how the training plan should also take account of apprentices' and trainees' skills on entry, and they provide information on access to assistance. These guidelines supplement other general guidelines on providing adequate training and supervision for apprentices and trainees in terms of meeting contractual arrangements.

Literacy consultants working closely with apprentices and trainees were concerned that learning activities often demanded language and literacy skills beyond those required by the actual work on the job. Addressing this balance was also a theme emerging from the literature review. They were also concerned that learning experiences were often focussed on completing passive, pencil and paper workbook activities which were abstract and limited in their relevance to workplace performance. They emphasised that learning experiences need to incorporate good models of workplace activities and include lots of opportunity for practice. When the range of stakeholders is considered, all with different roles, responsibilities and obligations, the overarching context of delivery is quite complex. These stakeholders include the employer, the training provider, the New Apprenticeship Centre and DETIR as manager of the contract. All ultimately impact on the apprenticeship system, albeit at different levels of operations. From the apprentices' and trainees' perspective, the ELL demands of their learning situations may be at a higher level than those required for undertaking the actual duties of the job. The level of ELL demands may also vary for employees, depending on the nature of the industry, the extent to which these skills have been integrated into training packages, the quality of the learning experiences, as well as learner attitude, expectations and existing skills.

Workplace activities

Hospitality

In the hospitality industry both employers and employees tended to focus on the operational aspects of the workplace. Emphasis was placed on a range of organisational skills and use of strategies seen as necessary to keep café and restaurant operations running smoothly. The ability to follow directions and implement workplace health and safety rules, along with the ability to identify and locate items in the kitchen, was evident. Daily operations reflected the busy and ongoing nature of the work. Communication with customers and colleagues was also reported to be a major consideration in a range of ways. These related to demands for interpersonal skills seen as necessary to support customer services, oral communication skills to explain menus, wine lists and drinks, and skills to request information from guests, take orders and encourage guests to return. While the point was made that the apprentice chef typically interacts less directly with customers than a waitperson, they were seen as needing to be familiar with kitchen and cooking equipment and procedures, to be able to read recipes, labels, orders and rules, read and implement workplace health and safety rules as well as give clear directions. The chef's status as the focus of the kitchen also impacted on the interpersonal communications. Workplace ELL demands were very much routine and predictable, but a breakdown in communication was seen as having the potential to have a serious impact on customer service, workplace interpersonal communications and workplace health and safety.

Business administration

In the case of a trainee in business administration, workplace activities tended to require a broader range of skills with a substantial amount of reading and writing, as well as communication on the telephone and use of fax and e-mail. Workplace activities required substantial consultation and communications with a range of colleagues and three superiors—the conduct of routine clerical procedures involving financial records, invoices and receipts, as well as telephone and reception work. This employee was also required to present a high level of customer service in terms of being polite, directing visitors to executive management, dealing with enquiries and generally promoting the business. A high level of interpersonal skills and the ability to get along with people were seen as very important because of the position's 'front desk' focus. This position also required the incumbent to have computer skills, including word processing, spreadsheeting and internet, along with other tasks such as mail merge, mail preparation and post out. This included tallying and costs and liaising with Australia Post, in addition to writing letters and photocopying. Tasks also included specific clerical work for executive management. The work schedule for this person was hectic. It required the ability to move from one task to another between answering incoming switchboard calls while carrying out clerical, word processing and spreadsheet duties. Thus, the wide range of activities demanded a high level of organisational skill to prioritise work and manage competing demands of supervisors, colleagues and customers as well as oral communication, interpersonal skills, computing, and reading and writing skills.

Engineering

Focussed discussions at an engineering works which employed five apprentices involved in fitting and turning revealed that inspection records formed a major part of the workplace ELL activities because they directly linked to the core product. Apprentices needed to know about basic machine functions and workplace operational functions. Changes in technology were seen as requiring apprentices to learn how to program computers. Reading demands included reading and understanding both machine manuals and maintenance manuals.

It was the view of the employer that demands for use of computers in the industry would increase, thus placing greater literacy skill demands on apprentices in this area. However, the level of mathematics required was seen as basic, although mechanical aptitude was seen as

important. Such aptitude was assessed on the basis of the school and vocational subjects which applicants had studied prior to their apprenticeship. Other information was also considered, such as successful completion of a pre-vocational course or other relevant post-school qualification. While the work was viewed by the employer as largely practical and hands-on, the importance of good interpersonal skills and a positive outlook was seen as very important to develop a team approach to the job. Developing a cohesive team of workers was reported to be difficult because of differences in employees' levels of interpersonal skills, worker maturity, variation in employee motivation and employees' level of confidence in being able to do the work. In this workplace, which was a family business, apprentices were carefully selected because they were seen as an important long-term investment. Quality assurance was an important aspect of the workplace because the core business was making parts to fit the specifications provided by the customers. The employer had undertaken training in this area and reported that even though quality assurance was a part of the work it was a difficult concept to convey to employees and to engage their commitment.

An apprentice who was seen as exemplary by his employer had left school at the end of Year 10 and had completed an Advanced Certificate in Engineering. This apprentice reported that he had needed to overcome past negative school learning experiences and lack of confidence in his ability to understand mathematics. His current work included responsibilities in relation to quality assurance, with particular regard to inspection reports and the identification and correction of faults in products or parts for customers. He emphasised the importance of having good interpersonal skills and writing skills to communicate with customers and deal with complaints. He also pointed out that he needed to be aware of legal issues in relation to transactions with customers in this regard. The apprentice described these skills as having developed over time, acknowledging that it was difficult at first but the experience gained through continually dealing with these aspects of the work had contributed to his being confident and competent.

This apprentice, who was nearing completion of his apprenticeship, believed that apprentices would benefit much more during their apprenticeship if they were provided with a mentor—a person allocated to 'look after' a particular apprentice. Emphasis was also placed on the need for more 'hands on' training, rather than workbook-style academic activities. This apprentice also stressed the need for vocational training to address the literacy and numeracy needs apprentices require to continue studying and access further education. Feeling confident about one's ELL skills was seen as an important factor underpinning confidence for communicating with customers and supervisors and also for asking for information and help. Past lack of success in the secondary school system in academic subjects, particularly with reading, writing and mathematics, was viewed by this apprentice as undermining one's ability to both engage in training and perform the required duties in the workplace. However, this apprentice felt that although it had been a struggle, he had now overcome much of this initial lack of confidence and saw himself as successful and was planning to continue his studies.

Automotive

In the automotive industry area of diesel fitting, a key literacy task involved completing a field service time sheet report for each job. This comprised one page that was highly structured through the use of lines and boxes. Basic data was recorded on such facts as travel and work start and finish times, details about the machine and customer, and the employee as service provider. The most difficult aspect was composing short succinct statements to report the work requirement, the fault and cause of failure, any repairs and tests completed and other related information. It was appropriate to use dot point form, depending on the nature of the job. Such reporting is not easy since it involves cause and effect relations. It works best when the problem has been clearly identified (for example, engine will not idle properly and seems to be missing on some cylinders), and the cause is easily identified (for example, cracks in leads to plugs). With such a basic problem, it becomes relatively easy to report on repairs and tests—for example, started engine, examined plugs and leads, found cracks in two leads, replaced all leads with a new set, and checked performance was satisfactory. However, the

situation may be more complicated, such as when the reported fault does not allow easy identification of the problem—for example, machine fails to start in spite of fuel, battery and oil checks. Under these circumstances there would be strong emphasis on the initial testing procedures before repairs could be contemplated. In the event of expensive repairs, the customer may take the cheapest option to maintain the machine's operation. This may be against the advice of the serviceperson. In a case like this, the report needs to record such action for future reference, particularly if the machine fails to operate again at a later date because of a temporary repair rather than a full repair. Such a report is viewed by management as a very important workplace document around which business occurs because it is a record for future reference as well as the most tangible record of service for the customer who pays for the service.

The need for apprentices to be competent in ELL was seen as increasing in importance in the current context of the work in this large high profile organisation by members of the management team, including the business' technical co-ordinator who was responsible for between four and five apprentices at a time. An example of the changing nature of work related to how the stereotype of the position of diesel fitter as someone who just needed to be able to lift heavy equipment and use various tools was no longer applicable because of the current competitive, streamlined workplace. Although the heavy aspect of the work was seen as always being a part of the job, the point was made that current approaches encouraged apprentices to further their skills and aspire to move up through the company.

Metal and engineering industry competency standards reflect a range of ELL skills. The foundation Unit MEM 1.1F A Undertaking interactive workplace communications applicable to the apprentice diesel fitter specifies a basic level of ability in speaking, listening, reading and writing and focusses on competence in communication. Sketches, drawings, production schedules, written machine or job instructions and client instructions may be used as the subject of communication in training. In the workplace, visited assessment procedures required completion of a written test as part of the assessment of the apprentice's ability to apply principles of occupational health and safety in the work environment. This test was a short-answer test structured by topics—for example, legal issues and hazards. Some questions specified the number of points required and others required the candidate to structure his or her own response—for example, 'Explain . . . ', 'List some of the reasons . . . ' It also included completion of the business' accident report. While it is difficult to rate the reading and writing demands of this assessment, it can be said that it reflects a level typical of a short-answer-type pencil and paper test used in a range of educational settings. It would be difficult to simplify any further as a pencil and paper test unless the format changed to a 'fill in the missing word' in a series of short paragraphs or it was broken down into short-answer questions. Another ELL task associated with learning and the job was the apprentice's responsibility for keeping a log of workplace activities to support the assessment of the specified competencies for on-the-job training. This reflects a range of skill demands for both learning and performance. Such a document also provides a basis for discussion of workplace activities and reflects reading and writing demands, the vocabulary associated with the work, organisational demands, and understanding of workplace processes, products and rules.

Building construction carpenter

In the building construction industry, the apprentice carpenter and joiner potentially operate in a more mobile environment. This may be from building site to building site for the same employer or may vary over time from one employer to another. There are substantial on-the-job demands for both ELL skills and numeracy. Workplace tasks demand knowledge of particular industry terminology relating to tools, materials, construction, specifications and plans, processes, regulations and people. Oral communication skills become more important as the apprentice has the opportunity to participate in discussions related to the various stages of building. The ability to follow directions, use tools, measure length accurately, read and interpret plans and specifications and relate these to the building structure and to the sequence of events in the construction process were all seen as important by the employer. The ability to take particular care with measuring, in terms of accuracy and avoiding wastage of materials, and the ability to take care of tools and clean the work area on completion of the

job reflect employer expectations regarding attitude to work as well as knowledge and skills. Interpersonal skills and organisational skills were viewed as an important part of the apprentice's development for on-the-job training if the apprentice expected to move on to manage projects in the future. This related particularly to the ability to communicate with local council building inspectors, builders, other tradespersons (plumbers, tilers, electricians and painters), supervisors and clients. These skills were also viewed as very important for dealing with problems and misunderstandings. Typical scenarios are materials not delivered on time and previous preparatory work by other trades not completed or completed unsatisfactorily.

Recruitment

Interviews with employers on site and a focussed discussion with a recruitment consultant managing the appointment of a trainee in cable making showed that ELL skills, along with skills in numeracy and technology, were seen as crucial to business success and good customer service. The ability to be effective in oral communications with customers and colleagues and to be able to write accurately and legibly for workplace needs was continually emphasised. ELL skills were also seen by employers as allowing apprentices and trainees to make a valuable contribution to the operations of their business in terms of achieving more cost-effective outcomes and helping to lower stress levels through being able to provide reliable assistance in the workplace.

Employing apprentices and trainees was seen as a long-term investment for a company and, so, the need to engage someone who could develop with the job was viewed as important, as was the ability to work in a team. Possession of high-level skills in interpersonal communication and degree of maturity, and 'getting on with people' were stated to be essential to teamwork. Interview discussions showed almost half of these employers to be sympathetic to the need for apprentices and trainees in their employ to improve their functional literacy skills if necessary. Employers were more sympathetic when they viewed the need for improvement as relatively minor compared with the apprentice or trainee otherwise doing 'an excellent job'.

ELL skills were seen as an important consideration in the recruitment and selection process. Written applications are generally viewed as providing an initial insight into literacy skills. However, applicants' successful completion of Year 12 schooling and a pre-vocational course tended to be a frequent preference in trade areas, with some employers in the engineering field stating that they looked for evidence of mechanical aptitude before ELL skills.

From the perspective of the recruitment consultant, it was reported that large companies with whom he dealt were very keen to employ the 'right person for the job'. This meant a person who was highly literate and who was able to work co-operatively in a team and make a contribution to the business. A recent trend observed by this consultant was that employers were widening their scope to consider older applicants as trainees because these applicants are likely to bring a range of skills with them to the workplace. He had found that companies were now more likely than before to consider someone as a potential trainee even though they may have worked in a different industry. The motivation for this was seen as stemming from the employers' view of the trainee as an investment for the company and a growing recognition of the need for multiskilled employees who were adaptable and motivated. This consultant stated that in his experience there was also an increase in the number of people considering a career change and that some were willing to exchange their existing long-term position for a traineeship even if it meant a lower salary.

Issues, trends and discussion

Investigation of the impact of apprentices' and trainees' ELL skills on workplace learning and performance revealed a complex situation in terms of both policy and practice. Emerging issues related to differences between employers' and employees' opinion, the importance of, and approaches to, teaching functional literacy skills, debate on the differences between ELL-skill demands for the job compared with those required for learning, differences in on-the-job demands across industries, the role of recruitment and selection, transition into the job and mentoring, areas for skills improvement, the impact of technological change and implications for lifelong learning.

The survey results showed that, in general, apprentices and trainees perceived their ELL skills as quite adequate for their workplace learning and performance. This was in sharp contrast to the opinion of their employers, who were much more conservative with their ratings and in some areas quite critical. However, in spite of apprentices' and trainees' extremely positive opinion about their ELL skills, a small proportion of the sample reported that they would like to improve their skills to help with both work and study. The skills they wanted to improve included writing, spelling, punctuation, reading comprehension and public speaking. Both employers and employees identified use of computers, the ability to write legibly, spell and punctuate writing accurately, and interpret graphical information as areas for improvement. Another area for improvement included interpersonal skills underpinning teamwork and communication between employees and customers and supervisors, particularly when there is potential conflict.

Employers tended to perceive ELL outcomes in terms of apprentices' and trainees' ability to communicate effectively in the workplace and their functional literacy skills, such as ability to compose written texts, write legibly and use accurate spelling, punctuation and grammar. Apprentices and trainees, on the other hand, were very confident of their ELL skills and tended to emphasise their ability to actually carry out the work as being the best evidence of their skills. It is of interest to note that some employers who were critical of employees' literacy skills made simple errors themselves, such as using a plural apostrophe 's' rather than singular, errors in subject–verb agreement, tense and common spelling errors. Similarly, some apprentices and trainees who argued their ELL skills were adequate or better than required for their job also made such similar common errors.

Discussions with apprentices and trainees suggested that the fact that they see themselves as being able to physically 'do the job' overrides to a large extent any weaknesses they may have with their ELL skills. This attitude may also relate to the fact that competence-based assessment procedures deem workers competent with a tick on record in a training log which reflects many activities of which ELL skills are only a part. In keeping with this perception is the fact that from these employees' viewpoint their work may not demand high-level literacy skills. Information from the literature review, site visits and survey comments provide evidence of substantial variation in on-the-job ELL demands depending on the nature of the work. Composing written texts may comprise only a small part of the overall work in some industries or have very limited application—for example, take a short telephone message. This issue was raised by one apprentice who was concerned that the on-the-job literacy demands were insufficient to maintain his skills over time after completing Year 12. However, English literacy demands may be substantially greater when it comes to fulfilling the requirements of training, although guidelines emphasise the need to keep ELL demands at the same level as those required to do the job in keeping with a seamless approach to on-the-

job and off-the-job training. This raises the issue as to how feasible it is for employees, in positions which have limited ELL demands, to embark on a training pathway which does not demand higher level ELL skills or different ELL skills. The question arises as to how one acquires new knowledge or develops learning-how-to-learn skills when starting from limited ELL skills. If school learning literacy demands are different from workplace literacy and learning demands, then one is faced with the need to clarify and question as to what constitutes training/learning demands, particularly as they relate to ELL skills.

In Mawer and Field's (1995, p.38) discussion of the issues impacting on non-native speakers of English, they specify that 'the language and literacy levels required to participate in training are often higher than those which are needed to perform the work'. It was implied that the ELL skills to acquire knowledge may be more demanding than those required to do the job. The trainer is faced with providing an inclusive curriculum and catering for a diverse range of communicative styles—for example, standard print materials may be sufficient for some learners but others may not have the necessary language or reading skills. Catering for different learner backgrounds becomes substantially more difficult as content knowledge in training increases in quantity and complexity and employees need to acquire new knowledge and skills, sometimes at speed. Course completion rates suggest apprentices and trainees in general cope reasonably well with the demands of training since they tend to study more intensively, undertaking more training modules during a year than general VET students yet achieving the same completion rates. Nevertheless, in the light of organisational and technological changes which are seen as increasing literacy skill demands in the workplace (Eubanks 1990; Kirsch & Jungeblut 1992), including more reliance on higher level cognitive skills in the use of technology (Grover 1990) as well as greater opportunity to use technology in learning, it may be argued that the new apprentice is entering a new communications era which requires a reassessment and definition of ELL-skill demands. These skills include recognising the need for information, formulating questions based on information needs, organising information for practical application and accessing sources of information, including computer-based and other technologies (Doyle 1992). If one aspires to the concept of the autonomous learner, which incorporates a view of the teacher as facilitator with the student taking responsibility for his or her learning, then the learner must have the skills to manage his or her own learning. Thus, 'learning how to learn' skills involving information and computer literacy, thinking skills and research skills must also be an important consideration. Furthermore, if we accept that workplace survival is becoming more and more dependent on being information literate within a knowledge-based workplace, as argued by Burnheim (1992), then a range of new skills, deemed necessary to allow the learner to engage in participatory learning applications and the process of lifelong learning, come into play. All in all, the question arises as to how such 'new' skills fit with existing ELL skills. Do they build on ELL skills, replace them or integrate with ELL skills to develop a worker with a more comprehensive skills' base? Clearly, there is a need for clarification and reconciliation/rationalisation of 'skills' as they relate to different jobs across different industries, to learning in vocational education and ELL skills.

This also highlights the question as to how apprentices and trainees, and indeed any employee or employer or person, become lifelong learners. It seems there are various sets of skills, including ELL skills and key competencies, which are relevant, but there is an assumption or expectation that everybody will be able to learn. While the ability to read in terms of comprehension of written texts has been the traditional indicator of one's ability to succeed in a course of learning, it may no longer be the case. In the light of information technology and use of multimedia, 'reading' skills may be different or more extensive and/or may have a different role in the hierarchy of skills to find information and evaluate information. One may also question whether delivery of training is keeping abreast of technological change in general and in relation to the workplace in terms of knowledge and availability of technology. This relates to professional development of trainers and availability of hardware, software, internet access, materials development and design of learning activities and assessment.

Another issue which impacts on the quality of learning experiences is the specialist knowledge and skill required of trainers in being able to cater for the range of learner backgrounds and deal with ELL demands of both the job requirements and for learning. Current approaches in junior secondary education stress the importance of linguistically informed teaching rather than the teaching of linguistic terms or concepts or other discrete instruction in skills (Frater 1998). Of relevance also is the extent to which trainers can draw upon appropriate resources and strategies to avoid a heavy reliance on print materials. Current policy and approaches to training advocate integrating ELL skills into training packages. This is seen as having several advantages over having separate ELL modules. Integration is expected to ensure that ELL skills are addressed in the context of the workplace since they go hand-in-hand with the various units of competence which rely upon these skills—for example, *Receive and process reservations* in tourism and *Undertake interactive workplace communication* in the metal and engineering industry.

By embedding ELL skills in general units of competence this also goes a long way to making sure that both learning experiences and assessment techniques are based on authentic workplace-based tasks and texts. There are two major drawbacks to achieving consistency. The first is the fact that identification of ELL skills depends on an analysis of specific industry needs, a specialist task in itself (Brown 1995; Norris et al. 1998). The second is variation in the extent to which ELL skills are made explicit across training packages. A further point is that whether ELL skills are implicit or explicit in training packages the nature of delivery may vary for a variety of reasons. These reasons include trainer background in literacy, the ELL-skill demands of the training program learning experiences, learner readiness, interest, motivation and expectations, to mention but a few. The level of demand for ELL skills also may vary according to the different industry areas, and there may be different emphases on oral communication skills compared with skills in reading and writing. Wickert and Kevin (1995, p.37) noted that 'different jobs in different companies and different locations require different profiles of literacy'. Within this context, training programs generally expect students to have 'basic ELL skills' to engage with the program. The teaching of functional literacy skills is largely seen as the responsibility of those with specific expertise in the area, although training is expected to accommodate a wide range of learner backgrounds and skills. Apprentices and trainees also have access to various avenues of assistance, including specialist help and attendance at specialist courses.

Recent changes to establish the New Apprenticeship system were also reflected in the findings of the study in terms of the profile of the sample of apprentices and trainees. There was evidence of the broadening of the base of training for apprentices and trainees, with those already in employment being able to undertake traineeships and the increased uptake of school-based apprenticeships. There was also evidence of some changes in terms of the traditional view of who is likely to undertake an apprenticeship and for how long, but most employers and employees did not have the most up-to-date knowledge of the current approach. For the groups in this study, the age range for trainees tended to be greater than for apprentices and there was evidence that traineeships are catering for some persons who may have left school relatively early. The sample of apprentices had completed more schooling than the national average for 1997, but the trainee group's educational background represented that of apprentices and trainees in general. Employers' more positive ratings of apprentices than trainees may reflect to some extent the generally higher entry level of the apprentices and their more recent school and vocational education preparatory course experience. There is also evidence that some people move from one training situation to another. One trainee had undertaken an apprenticeship previously, but it was not clear how often trainees and apprentices make such changes.

Provisions for apprenticeships and traineeships also occur within a context of change within the business environment. Changes occur in the way businesses operate and business proprietors move to other businesses and sometimes close. Businesses may employ either or both apprentices and trainees, with these employees following different training pathways. The work experience of apprentices in particular may involve changing work environments depending on the industry. For instance, an apprentice carpenter and joiner may move from

building site to building site for the same employer or may move from one employer to another as employers fulfil their contracts. Since some businesses offer more than one type of traineeship—for example, retail sales and business management—or employ several apprentices working in the same area, this provides an insight into the scope of training arrangements which may impact on a workplace at any given time.

Employers comprise a diverse group, with some having moved between businesses in different industry areas. These employers have the experience of employing apprentices and trainees across different industry areas and workplace contexts. Some business proprietors have long-term experience in employing trainees and apprentices in particular, but from their perspective, little seemed to have changed in the system.

Employers tended to see the recruitment and selection process as ensuring their apprentices and trainees have adequate ELL skills. However, this does not necessarily work in practice. Their criticisms of employees' functional literacy skills appears to be intertwined with their perceptions of employees' attitude to work and level of maturity, again highlighting the importance of the role of interpersonal skills in the employer, employee, colleague and customer relationship. Several factors appear to influence employers' opinion as to whether their apprentices and trainees have potential to advance in the job. These factors included apprentices' and trainees' attitude to the job, the adequacy of their ELL skills, particularly functional literacy skills, and the ability to get along with customers and colleagues. Employers tend to make allowances for some degree of immaturity because of age and their views on youth and tend to be to some extent sympathetic towards the younger employees being in a transitional learning phase if they are in their first job. From the apprentice perspective, there was a request for the apprenticeship program to follow a very strong mentoring process, with emphasis on expert demonstration, guided practice and scaffolding support until independence is gained, as described by Rose (1994). Apprentices emphasised that it was important for their success in the workplace to have a mentor who was sympathetic to the on-the-job learning situation and had skills to demonstrate and support their learning.

Experiences with the recruitment and selection process also contribute to employers' perceptions of potential apprentices' and trainees' literacy skills. Job application presentation and written text were seen as providing some evidence of applicants' literacy skills. This process was seen as acting to some extent to ensure an apprentice or trainee had a reasonable skills' base to cope. On the other hand, there is a recognised need for assistance with literacy skills for apprentices and trainees and implementation is supported by the employment of government literacy consultants. In addition, guidelines in Queensland focus on assessing apprentices' and trainees' needs in this area so that training programs can build on and develop existing skills and appropriate assistance or intervention can be provided or advised as necessary.

A comparison of NRS language and literacy features across levels (DEET 1995c) shows that functional literacy skills are comprehensively described. For instance, Level 2 includes 'reads and writes legible script', and 'conveys overall meaning despite possible variations in spelling and grammar', with Level 3 specifying 'Uses and comprehends some complex and compound sentences', 'Uses legible hand writing style as required by audience and purpose for writing' compared with Level 4 features 'Spells accurately most frequently used words', 'Uses punctuation with few errors', and 'Uses and comprehends simple and complex syntactic structures; grammatical variations rarely interfere with meaning and comprehension'. Thus, common errors made by both employers and employees while completing the survey for this research may be argued to be at Level 4, and since meaning was not impeded the completed survey may be judged appropriate for the audience and purpose.

A further issue is that making provisions for ELL-skill development in the context of a workplace is not easy. It needs to take account of a range of factors. First, it is very likely that any serious ELL problems experienced by apprentices and trainees would have been previously identified during their schooling. For many people these skills may not have been developed for a wide range of reasons. Ultimately, when people perceive their skills as

inadequate, they are likely to have less confidence with ELL tasks, low self-esteem and low expectations depending on the workplace demands. This typically translates to an avoidance of situations which draw attention to ELL skills. While it may be argued that literacy intervention (Clay 1998) has met with substantial success in recent times for young children in their first years of schooling, intervention at the junior secondary level and beyond has proved more difficult, with various approaches continuing to be researched (Hattie, Biggs & Purdie 1996; Rich, Murphy & O'Brien 1996; Hobbs & O'Neill 1998). A work- and study-oriented intervention strategy presents new difficulties and introduces a further substantial challenge. These difficulties relate to the fact that employees in need of literacy intervention are likely to have 'suffered' in some way in their past educational experience. They are more likely to have low self-esteem and lack confidence when it comes to tasks involving reading and writing. This influences the way literacy intervention may be delivered in workplaces and work-related settings. The major danger is the potential to discriminate against the employees involved by 'singling them out' as being in deficit. While being in receipt of extra tuition in ELL skills may be seen as legitimate for employees who are non-native speakers of English, when applied to native speakers of English these employees become stigmatised. As a consequence of this latter view, such employees are overlooked when opportunities arise to progress in the workplace. Additionally, other less overtly demonstrable, valuable skills which an employee has to offer may be overshadowed by perceptions created by the prominence of poor handwriting, punctuation, spelling and grammar. This creates a situation where the person may feel inadequate because of difficulties with ELL skills and devalued through lack of recognition of his or her strengths, depending on the way the situation is dealt with in the workplace and training. As with all learning, there is a need to create a positive supportive learning environment which builds on students' existing skills and sets realistic, achievable goals.

It appears that spelling, grammar, sentence structure, the ability to 'put sentences together' and write legibly is very much an employer requirement. Report writing is continually mentioned as an activity which is not readily done well. In the case of diesel fitters, providing a one-page written report on the work they carried out for a customer in a presentable manner and also containing relevant accurate information is high priority. For these apprentices, business may revolve around multiple copies (carbon) of the report—for example, to customer, to accounts, to records, to job file for invoicing and apprentice's own record. The report is seen as a reflection on the image of the company, and issues of quality control, competition and professionalism also come into play. The content provides a record of the advice on service to the customer which may be required later for future services or customer complaint or dispute and possible litigation. The context of writing such reports means they are 'first draft' since they need to be written quickly on completion of the task, often in the field in the presence of the customer, yet they need to be of the highest standard for this purpose and audience. Although they may be written in point form, the task is not easy since the content relates to identifying cause and effect relations or identifying a problem and taking varied and often sequential actions to solve it, as well as providing advice. In this case, the task could be completed more easily and effectively by word processing an appropriate template with the aid of a laptop computer in the field.

An apprentice's maintenance of his/her work log is also a significant literacy task. Since it has to endure over time, organisational and presentation skills are necessary, along with the need for neatness, legible hand writing, accuracy in recording and transcribing information and completion of other pencil and paper tasks—for example, assessments.

High levels of ELL skills were seen as important if employees expected to follow a career path. Selection processes were seen as assisting greatly in ensuring apprentices and trainees had the skills to undertake an apprenticeship or traineeship. Employers who were unhappy with the level of their apprentices' or trainees' literacy skills also tended to criticise other aspects of worker performance as unsatisfactory. Besides considering applicants' ELL skills, employers also emphasised the need for employees to be committed to the job, to be able to concentrate, be responsive and think critically. Employees' ability to conceptualise the

business and its operations was also seen as underpinning their understanding and implementation of quality assurance processes and provision of customer service.

Employers' responses suggest they are generally happy with the way apprentices and trainees communicate with colleagues and work to achieve a team goal. However, it appears that when workplace interpersonal communications are more demanding, apprentices' and trainees' communication skills are seen as less adequate. For instance, employers were less positive about their ability to communicate effectively with supervisors and customers, although they were seen as able to show sensitivity to customer needs. Skills were also viewed less positively for dealing with misunderstandings, taking the viewpoint of others into account, taking responsibility for their own work and appreciating constructive criticism. Apprentices and trainees were also seen as being able to participate in training discussions yet not as easily able to discuss what they did or did not understand. From the employer perspective, this is explained by the fact that these employees tend to be immature and lack experience in a workplace because it is usually their first real job. Apprentices and trainees are more likely to see themselves as being 'picked on' or misunderstood, depending on employers' ability to discuss such matters sensitively and constructively. One would also expect apprentices and trainees to be somewhat defensive in their responses since the research questions were focussing on their ELL skills. Overall, it appears that both employers and employees need to work together to develop interpersonal skills and negotiation skills which underpin these kinds of workplace outcomes. This needs to consider all the relationships involved—for example, colleague to colleague, trainee to supervisor and relations with customers.

While employers saw apprentices and trainees as being able to learn skills in the work place, find information, and understand times and dates, they were critical of their readiness to begin learning and their ability to use study skills effectively and prioritise their work. Employers also generally viewed apprentices and trainees as being able to perform their workplace duties and understand workplace processes and products, instructional manuals, workplace health and safety rules and key concepts and issues in the workplace. However, overall employers suggested that there should be a greater focus on teaching apprentices and trainees about business operations, quality assurance and customer service. A grasp of such knowledge was seen as necessary for employees to be able to understand the 'how and why' of their work. This may be described as the ability to engage with the workplace environment just as one engages with a program of learning. This is not unrelated to the mentoring process and the need to consider the transitional phase often from school to work which most apprentices and trainees have to accommodate. This transitional phase is the time when the new employee needs to gain an overview of the industry, the job and how his or her role fits into such aspects as the production cycle, customer service, roles and responsibilities of colleagues and expectations of managers besides the operational details. Thus, ELL skills are required at every step of the way, with oral communication playing a large role in the whole scheme of things but seemingly played down in its recognition as both underpinning workplace communications and delivery of training. Since the majority of apprentices and trainees move from school to work and others are typically moving into a new area, it seems the quality of the workplace-learning environment and this transitional phase has the potential to provide an important foundation for future success. School apprenticeships provide a source of information for examining the similarities of ELL demands of school learning and training which would further illuminate the issue of ELL-skill demands for learning versus work and this transitional stage. This would have mutual benefit for students in secondary schools preparing to undertake training.

With regard to literacy skills, employers were generally positive about apprentices' and trainees' basic reading skills, seeing them as able to read to carry out their work duties, follow instructions and read training materials. But most employers were of the opinion that they were less competent when it came to reading plans, diagrams and visual materials—a potentially higher level task.

Employers viewed apprentices and trainees as being able to write to complete forms as required in the workplace but were less positive about other writing tasks. These tasks involved writing notes, messages and letters, writing for study needs and workplace-learning needs. Apprentices and trainees were also less confident about their writing skills, particularly writing for study needs. Reading and writing extended written texts were reported as difficult. Although employers saw apprentices and trainees as being relatively competent in their understanding of visual communication—such as signs, pictures and advertising material—ratings suggested they were perceived as not so good at doing basic mathematical calculations (with or without a calculator), Understanding and using technical language and interpreting graphical information.

Out of all the activity sets, apprentices and trainees were seen as being relatively competent in all four procedural-related activities. These were following verbal directions, carrying out sequences of activities, putting workplace health and safety rules into practice and taking telephone messages accurately, thus representing many everyday workplace tasks.

Comparison of the three subgroup industry categories revealed substantial differences in employers' opinion. Employers in the Other tradespersons and related workers category, to which employees in hairdressing typically belong, had a wider ranging opinion of their employees' ELL skills and overall gave lower ratings than average. In addition, employers of apprentices were most positive and employees in the Mechanical and fabrication engineering tradespersons category received higher ratings than other groups for specific skills. While results of the subcategory comparisons should be treated with caution because of sample sizes and response rates, these results do reflect other recent findings showing variation across industries. For instance, the employer satisfaction with graduate skills survey (DETYA 1998) found that employers generally rated TAFE graduates in the hospitality industry very highly compared with those in the retail trade on similar skills. Skills which new graduates were seen as needing to improve in were problem-solving skills, oral business communication skills and interpersonal skills with other staff. Similarly, qualities employers identified as important in the workplace included the latter skills, together with teamwork skills, comprehension of business processes, and skills in literacy, numeracy, computing, writing, business communications and time management.

It appears, therefore, that in spite of the policies, programs and specialist assistance to provide for the teaching and bridging of employee ELL skills, some apprentices and trainees do not meet the standards expected by employers. Although apprentices and trainees in this study appear highly confident about their ELL skills but do admit to some need for improvement, employers generally see their employees as being equipped with very basic skills. When both oral communication and reading and writing requires more integration of cognitive skills, interpersonal skills and technical demands then employers see a need for skills development.

The results also reflect the different ELL-skill demands across the different industry categories—for example, clerical workers, foundry and engineering workers and hairdressing. In particular, the above average rating employers in the clerical workers category gave to their employees' skills in spelling and punctuating writing reflects the obvious demands of these types of jobs and the daily practice of these skills. This result also mirrors the findings of Wickert and Kevin (1995, p.39) who stated that 'the better performance of clerical workers may reflect their greater use of literacy skills at work'.

It appears that while the ideal in training is to deliver a program which does not require ELL skills at a level beyond those required on the job, this issue is debatable. First, since almost half the workforce work at the operational level and most VET enrolments are at Certificate III level then it is quite likely that training will involve some ELL skills not used in the workplace. Second, training is likely to involve at least some acquisition of knowledge over a set time frame and in some cases use of distance education materials and multimedia. This supports the argument that ELL skills for training are likely to be more demanding than the workplace. Third, if the employee is to aspire to the path of lifelong learning then this assumes ongoing development or possession of ELL skills to 'learn how to learn', including

information literacy skills, research skills and critical-thinking skills and an attitude to learning to make this choice of pathway accessible.

While the integration of ELL skills into training packages is sound policy and functional skills are comprehensively described in the NRS, additional information is required to enable more consistent, effective delivery in keeping with organisational and technological changes occurring in the workplace and employer requirements. The way ELL skills relate to other skills and qualities employers identify as important to the job also need to be addressed in terms of putting ELL skills into practice. There is a lack of a system view or an across-industry view of the scope, range and demands of ELL skills for both workplace performance and learning and in the context of workplace change and lifelong learning.

Findings

Employer and employee opinions

The results of the research clearly show that employers place great emphasis on apprentices and trainees having adequate ELL skills in conjunction with a range of other organisational skills, knowledge of business operations as well as attitudinal-related qualities they perceive as influencing workplace performance. From the employer perspective, ELL skills are associated firstly with the physical evidence resulting from workplace literacy-related tasks, including written job applications. Apprentices' and trainees' ELL skills are viewed as having a profound influence on workplace performance as well as learning. It was the general view that written texts, composed by employees primarily for an audience in the public arena, should be presentable in terms of legibility if hand written, accuracy of spelling and punctuation, sentence cohesion and meaning. Employers in workplaces where written texts such as inspection reports, service reports, quotations and correspondence to customers were at the centre of the business' operations placed high priority on such written texts fulfilling these criteria. Producing high quality documents was viewed as essential to successful business operations. Poorly written documents were seen as impacting on business in two ways. First, poor handwriting, inaccurate spelling and inadequate sentence construction were seen as detracting from the business' image which the employer wished to project to the public. Second, the resulting lack of clarity of meaning had the potential to expose businesses to unnecessary risks in terms of complaints about the work involved, including the risk of litigation. Similarly, where work related to reading information to carry out the work—such as accurately fulfilling requests for goods—errors in reading comprehension also had the potential to cost the business extra money because goods had to be returned and replaced. From the employer perspective, employees were seen as needing to pay attention to, and demonstrate, adequate ELL skills, along with a range of other skills and knowledge to carry out the work, progress in the job and follow a career path.

On the surface, the opinion of apprentices and trainees about their own ELL skills was extremely positive compared with that of employers. However, both employers and employees overall identified a need for improvement in the areas of interpreting graphical information, writing legibly, spelling and punctuation and using computers. Both apprentices and trainees acknowledged a need to improve their ELL skills and recognised that these skills were important for their work and continued learning. Perceptions of the adequacy of apprentices' and trainees' ELL skills differed between employers in different industry areas. However, employers of apprentices were consistently more positive about these employees' ELL skills. Two factors may have contributed to this. First, the apprentices surveyed tended to have higher levels of education, including some completion of pre-vocational courses. Second, employers of apprentices are likely to invest more resources in their employees because of the longer time frame involved and so be more protective of this investment. Other differences showed employers were substantially more positive about their employees involved in clerical work in terms of their ability to spell and punctuate writing compared with all other groups.

In keeping with the trends found in the literature review, employers were of the opinion that ELL-skill demands were increasing in importance and broadening to incorporate information and technology demands.

Practical application of ELL skills

The issues and outcomes involved in the practical application of ELL skills to apprentices' and trainees' learning and performance in the workplace are far reaching. The visibility of written texts makes skills associated with writing more prominent, but the need for effective oral communication skills and interpersonal skills is also at the core of workplace communications, both internal and external, and should not be underestimated. The ability to communicate effectively with supervisors, colleagues and customers and work in a team is an important part of work which relates to English language skills. However, effectiveness in practice does not equate to simply having speaking and listening skills but involves other factors such as how the employee integrates and applies his or her skills, thinks critically, evaluates, uses initiative, organises time, conceptualises business operations and behaves strategically in terms of achieving the business goals.

Apprentices' and trainees' readiness to accommodate the ELL demands of the workplace also emerged as an important factor. The extent to which school ELL skills provide a foundation for the demands of the workplace in terms of performance and learning is not clear. Although employers clearly expect schools to prepare students for work in terms of literacy and numeracy, there is poor transfer of skills developed at school to those required in the workplace (Prince 1992). This is reinforced by other research which has shown school literacy involves 'reading to learn' compared with workplace literacy focussing on 'reading to do' (Diehl & Mikulecky 1980; Baylis, Caldwell & Nussbaum ,. However, from the perspective of employers and employees, there seems to be little distinction and literacy skills continue to be associated with reading and writing regardless of purpose. Thus, if employers and employees, trainers and policy-makers are to be aiming for a common goal, then it seems these skill demands and the demands of learning need to be reviewed to make visible the skills' development pathway from school to work. There is also a need to review these skills in the light of the demands of technology and the concept of a knowledge-based economy in the 'new world of work'. Impinging on this issue is the fact that there is considerable variation in the ELL demands of different jobs and different industry areas, yet there is no overarching framework to assist in conceptualising this view. While some jobs rely heavily upon oral communication skills, others may place heavy demands on clerical skills and/or reading, writing and evaluative skills, and/or use of computer software. Literacy skills for using software also vary according to the program. Similarly, some jobs also require the employee to apply his or her ELL skills in a more technical or mathematical setting. In addition, workplace environments within which these skills are ultimately applied differ considerably. In some settings, demands placed on employees are dictated largely by the frequency of incoming telephone calls around which administrative duties must be organised. In other settings, work is highly focussed, predictable and occurs sequentially. Other employees find themselves carrying out their duties across a range of sites where the nature of the work requires on-the-spot decision-making. However, in all these situations employees need to be able to automatically draw on their ELL skills according to the specific demands of the job. They also need appropriate metacognitive skills and organisational skills to make best use of their ELL skills.

Besides ELL-skill demands varying between jobs and industries, it was found that there may be a mismatch between the ELL skills required on the job and the ELL skills required to learn, particularly for jobs which have low-level literacy demands. While it may be the ideal to maintain a balance between the two demands, it is likely that the ELL demands of some jobs have limited application for learning. This issue requires further investigation and is also significant to establishing how technology and information literacy fits into workplace performance and learning as well as establishing an approach to learning which is in keeping with the need to be adaptable, to reskill and takes account of the goal of lifelong learning. Adequate ELL skills were also seen as important for employees' career potential. This view was associated with both workplace demands and the ELL skills needed to acquire new knowledge.

The learning environment applicable to apprenticeships and traineeships also influences apprentices' and trainees' practical application of their ELL skills. The need for greater emphasis on a mentoring process was suggested as being the best way to model workplace practices and assist employees in understanding the business' operations and ultimately gain confidence and competence in doing the work. It was also found that there is likely to be variation in the way ELL skills are integrated into training packages for different industries and that variation is also likely to occur in the way training is delivered on the basis of different trainers and their different linguistic knowledge, and also the flexibility of delivery modes. The initial audit of the ELL demands for the various industries and jobs provides the crucial foundation to underpin training.

Completion rates in VET suggest that apprentices' and trainees' ELL skills for study are at least as good as the general population in VET or better since these employees attain the same level of completion but study more course modules. The fact that these units are generally at Certificate III level for most apprentices and trainees also provides an indication of the underlying ELL-skill demands for learning.

When apprentices and trainees are perceived as lacking in terms of adequacy of ELL skills, this has the potential to have very negative outcomes for all unless it is dealt with in a sensitive manner to avoid stigmatisation. Currently, there is a range of ways for employees to gain assistance to develop their ELL skills. There are also resources available to assist with the various aspects of planning and delivery of competencies relating to ELL-skill demands. Policy and guidelines for developing training programs emphasise the need to identify and build on apprentices' and trainees' existing ELL skills. Developing functional literacy skills in the context of VET is seen as a specialist task. Without adequate ELL skills apprentices and trainees are typically prevented from engaging in courses of learning which rely on print materials and/or demand extended reading and writing tasks. Employers require apprentices and trainees to demonstrate adequate ELL skills in their terms to be considered for promotion, particularly if the job places heavy demands on these skills.

Employers reinforced the view that when employees are unhappy about their ELL skills, they suffer from low self-esteem and lack confidence in doing their work. They viewed ELL skills as essential to carry out workplace duties, conduct business and contribute to customer service. These skills were seen as infiltrating every aspect of work impacting on the quality of interpersonal relations and applicable to all modes of communication. They were also seen as impacting on business costs and cost effectiveness of business operations. Employees' ability to adapt to the workplace was also seen as related to their ELL skills.

References

ABS (Australian Bureau of Statistics) 1997, *Aspects of literacy: Assessed skill levels, Australia 1996*, ABS, Australian Government Publishing Service, Canberra.

ANTA (Australian National Training Authority) 1998, *Achieving equitable outcomes: A supporting paper to Australia's national strategy for vocational education and training 1998–2003*, ANTA, Brisbane.

Australian Language and Literacy Council 1996, *Literacy at work: Incorporating English language and literacy competencies into industry/enterprise standards*, AGPS, Canberra.

Baylis, P, Caldwell, J & Nussbaum, L 1991, *Language and literacy in the textile, clothing and footwear industries: Project report*, NSWAMES, Sydney.

Brock, P 1998, 'Breaking some myths – again', *Australian Journal of Language and Literacy*, February, vol.21, no.1, pp.8–26.

Brown, JD 1995, *The elements of language curriculum: A systematic approach to program development*, Heinle & Heinle, New York.

Burnheim, R 1992, *Information literacy: The keystone of the bridge*, Paper presented at the TAFE National Conference on Student Services, October 14–16, ED356775, Brisbane.

Cahill, R 1998, 'Literacy: What do you think?', *Australian Journal of Language and Literacy*, vol.21, no.1, pp.28–44.

Clay, M 1998, *By different pathways to common outcomes*, Stenhouse Publishers, York, Me.

Courtenay, M 1994, *Integrating language, literacy and numeracy provision into vocational education and training*, Foundation Studies Training Division, Blacktown, NSW.

—— & Mawer, G 1995, 'Integrating language, literacy and numeracy into vocational education and training: A framework', *Training Agenda*, vol.3, no.3, pp.3–7.

Deakin, R & Sims, J 1994, 'Developing a conceptual framework', in *Breathing life into training: A model of integrated training*, eds R Sefton, P Waterhouse & R Deakin, NAITB, Victoria.

DEET (Department of Employment Education and Training) 1993, *The workplace English language and literacy program: 1993 guidelines*, AGPS, Canberra.

—— 1995a, *The workplace English language and literacy (WELL) program*, Commonwealth of Australia, DEET, Canberra.

—— 1995b, *Literacy encounters: Meeting the needs of Aboriginal and Torres Strait Islanders in remote areas*, Commonwealth of Australia, DEET, Canberra.

—— 1995c, *National Reporting System, A mechanism for reporting adult English language, literacy and numeracy indicators of competence*, Adult Community and Further Education Division, Office of Training and Further Education, Melbourne.

DEETYA (Department of Employment, Education, Training and Youth Affairs) 1996, *More than money can say: The impact of ESL and literacy training in the Australian workplace*, AGPS, Canberra.

DETIR (Department of Employment, Education, Training and Industrial Relations) 2000, *Meeting the language, literacy & numeracy needs of apprentices and trainees: Guidelines for training providers*, DETIR, Brisbane.

DETYA (Department of Education, Training and Youth Affairs) 1998, *Research on employer satisfaction with graduate skills, Interim report*, Government and Social Research Team, ACNeilsen Research Services, DETYA, Canberra.

Diehl, W & Mikulecky, L 1980, 'The nature of reading at work', *Journal of Reading*, vol.24, December, pp.221–227.

Doyle, CS 1992, *Outcome measures for information literacy within the National Education Goals of 1990*, Final Report to National Forum on Information Literacy, June, US Department of Education, Washington DC.

Education Department of South Australia 1984, *Early Literacy Inservice Course*, Education Department of South Australia, Adelaide.

Education Queensland 1999, *Queensland School Surveys: Student and parent views about school and schooling, staff views about school as a workplace*, Performance Measurement Office and Review Branch, Brisbane.

Eubanks, P 1990, 'Literacy crisis threatens hospital workforce', *Hospital*, vol.64, no.2, pp.50–54.

Fitzpatrick, L & Roberts, A 1997, *Workplace communication in national training packages: A practical guide*, Language Australia, Melbourne.

Frater, G 1998, 'Assessing literacy and special needs in secondary schools. A case for new paradigms', in *Assessing reading 2: Changing practice in classrooms, International perspectives on reading assessment*, eds M Cole & R Jenkins, Routledge, London.

Gee, P, Hull, G & Lankshear, C 1996, *The new work order: Behind the language of the new capitalism*, Allen & Unwin, St Leonards, NSW.

Gibb, J, Keenan, M & Solomon, N 1996, *Literacy at work: Incorporating English language and literacy competencies into industry/enterprise standards*, Australian Language and Literacy Council, AGPS, Canberra.

Graham, G & Associates 1997, *Best practice in Queensland training*, ANTA, Brisbane.

Grover, J 1990, *Research in workplace literacy: The level of literacy required in specific occupations, Final report*, Employment and Training Administration (DOL), RMC Research Corp., Washington DC.

Hamilton, L 1992, *Teaching in the workplace: A case study of a workplace language program*, Adult Migrant Education Service, Department of Education, Queensland.

Hattie, J, Biggs, J & Purdie, N 1996, 'Effects of learning skills interventions on student learning: A meta-analysis', *Review of Educational Research*, vol.66, no.2, Summer, pp.99–136.

Highet, K, Makin, A, McMurray R & Nowicki, U 1994, *National framework of adult English language, literacy and numeracy competence: Application to adult basic education curriculum development*, ACTRAC Products, Frankston, Victoria.

Kelly, A & Searle, J 1999, *Literacy and numeracy on the motorway: A case study of the effects of the inclusion of literacy and numeracy competencies within the civil construction industry training packages*, Adult Literacy National Project by the Commonwealth of Australia through the Department of Education, Training and Youth Affairs, Canberra.

Kirsch, IS & Jungeblut, A 1992, *Profiling the literacy proficiencies of JTPA and ES/UI populations*, Final report to the Department of Labour, Educational Testing Service, Princeton, NJ.

Hislop, J 1994, *Evaluation of WELL Project at John Holland Construction & Engineering*, Foundations Studies Division, Western Sydney Institute of TAFE.

Hobbs, E & O'Neill, S 1998, *Literacy and numeracy initiatives in junior secondary schools*, A report prepared for Education Queensland, Queensland and Catholic Education & Queensland Independent Schools Association, Brisbane.

Ingram, DE & O'Neill, S 1999, 'Cross-cultural attitudes in foreign language programmes', *PASAA, A Journal of Language Teaching and Learning in Thailand*, Chlalongkorn University, Thailand.

Joyce, H 1992, *Workplace texts in the language classroom*, NSWAMES, Sydney.

KPMG Management Consulting 1998, *Impact of the growth of labour hire companies on the apprenticeship system*, A report prepared for the Australian National Training Authority, Brisbane.

Local Government and Shires Association of NSW 1997, *1996–1997 WELL Local government language, literacy and numeracy integration project, Final report*, Sydney.

McKenna, R, Wignall, L & Colvey, S 1998, *Ten fold returns: Information kit for HR and training managers on incorporating language, literacy and numeracy skills into training packages*, ANTA, Melbourne.

Marks, G & Ainley, J 1997, 'Reading comprehension and numeracy among junior secondary school students in Australia', *LSAY Research Report No. 3*, ACER, Melbourne.

Marshman, R 1998, *Employment of apprentices: On the brink of crisis*, Bob Marshman & Associates, Melbourne.

Mawer, G & Field, L 1995, *One size fits some: Competency-based training and non-English speaking background people*, Non-English Speaking Background Ministerial Consultative Group on Vocational Education and Training (DEET), Canberra.

Millar, P & Falk, I 1999, *Communication and catering competencies: Implementation of training packages and the effects of the inclusion of literacy and numeracy in industry training packages, in relation to rural centres*, Adult Literacy and Numeracy Research Consortium funded under the ANTA Adult Literacy National Project by the Commonwealth of Australia through the Department of Education, Training and Youth Affairs, Canberra.

NCVER (National Centre for Vocational Education Research) 1997, *The national strategy for vocational education and training in Australia 1997–2000*, NCVER, Adelaide.

—— 1998, *Young people 1997: An overview*, NCVER, Adelaide.

—— 1999a, *Australian apprentices and trainees statistics: Trends 1995 to 1998*, NCVER, Adelaide.

—— 1999b, *Australian apprentices and trainees statistics Australian apprentices and trainees recent trends: At a glance*, NCVER, Adelaide.

Norris, JM, Brown, JD, Hudson, T & Yoshioka, J 1998, *Designing second language performance assessments*, Honolulu, HI, Second Language Teaching and Curriculum Centre, University of Hawaii's Press.

OECD (Organization for Economic Co-operation and Development) 2000, *Literacy in the information age, Final report of the international adult literacy survey*, OECD, Education, Employment, Labour and Social Affairs, Paris.

O'Neill, S & Hobbs, E 1998, *Environmental scan of literacy and numeracy initiatives in junior secondary schools*, Griffith University, Centre for Applied Linguistics and Languages, Brisbane.

Parkinson, C 1996, 'Linking industry training with language and literacy', in *Critical issues, essential priorities: conference papers: 18th national conference held at La Trobe University*, 23–25 November 1995, ACAL/VALBEC, Canberra.

Patterson, S 1996, *Made to measure: Language, literacy and numeracy in TCF Industry training, a guide for workplace trainers*, NSWAMES, Sydney.

Prince, D 1992, *Literacy in the workplace: A self-study guide for teachers*, Surry Hills, NSW, Curriculum Support Unit, NSWAMES, Sydney.

Queensland School Curriculum Council 1998, *Queensland Year 6 Testing Program*, QSCC, Brisbane.

Rainer, R & O'Dwyer, C 1992, *Workplace language and literacy training needs analysis*, VTCF ITB, Melbourne.

Ray, J 1999, *Apprenticeship in Australia: An historical snapshot*, NCVER, Adelaide.

Rich, K, Murphy, K & O'Brien, C 1996; *Evaluation of the language and literacy elements of the special intervention program: 1994–1995: Interim report: Case study component*, February, AGPS, Canberra.

Rizzetti, J 1995, *More than just words: Good practice in literacy provision in the vocational context*, Northern Metropolitan College of TAFE, Preston, Victoria.

RMIT Applied Linguistics Unit 1994, *National TAFE language course: Stage one generic curriculum*, ACTRAC Products Ltd., Frankston, Victoria.

Robinson, C 1998, 'An overview of Australian vocational education and training research', in *VET research: Influencing policy and practice*, eds J McIntyre & M Barrett, Australian Vocational and Training Research Organisation, Sydney, pp.12–22.

Rose, D 1994, 'Apprentices and exploration: A new approach to literacy instruction', *Scholastic Literacy Research Paper, Volume 6*, Scholastic Literacy Research Series Papers, pp.1–8.

Schultz, K 1997, 'Discourses of workplace education: A challenge to the New Orthodoxy', in *Changing work, changing workers: Critical perspectives on language, literacy, and skills*, ed. G Hull, State University of New York Press, Albany, pp.343–383.

Smith, E & Keating, J 1997, *Making sense of training reform and competency based training*, Wentworth Falls, NSW, Social Science Press.

Stephens, U 1991, *Increasing participation in rural literacy programs*, Argyle Consultancy Group, Goulburn, NSW.

Street, B 1993, *Cross-cultural approaches to literacy*, Cambridge University Press, Cambridge, UK.

Stuart, J 1996, *Language, literacy and numeracy demands of workplace training, Vol. 2, Food, beverage and pharmaceutical processing industry*, NSWAMES, Sydney.

Wallace, S & Murray, J 1997, *Workplace language and literacy in action: Case studies one*, ANTA, Melbourne.

Watts, DW & Watkins, R 1991, *Post-school education and training: Literacy, numeracy, entry and selection for vocational education and training'*, NTETA, Darwin.
Wickert, R 1993, 'Constructing adult literacy: Mythologies and identities', in *Literacy in contexts: Australian perspectives and issues*, eds A Luke & P Gilbert, Allen & Unwin, St Leonards, pp.29–38.
—— & Kevin, M 1995, *No single measure: A survey of Australian adult literacy*, Centre for Language and Literacy, University of Technology, Sydney.
Wignall, P & Boyd, K 1994, *Kakadu National Park as a case study in workplace literacy*, National Languages and Literacy Institute of Australia Ltd., Melbourne.
Wignall, L 1998, *Built in, not bolted on: Information kit for language, literacy and numeracy coordinators on incorporating communication skills into training packages*, ANTA, Melbourne.

Appendix A

Employer and employee surveys

Each survey displayed Commonwealth Government Statistical Clearing House Approval Number 00492–01 and approval Logo. Employers of apprentices received the same survey as employers of trainees except for the reference to the type of employee and the industry examples provided in Question 1 and 2.

Centre for Applied Linguistics and Languages
Griffith University.

Confidential

Survey of Workplace Literacy Skills
February 2000

Please read this first

Please complete the questionnaire for the **BUSINESS IDENTIFIED IN THE ADDRESS LABEL** and post in the reply paid envelope by **Wednesday 01 March 2000.**

1. What is the main kind of industry or service carried out by this business e.g. automotive parts manufacturing, automotive repairs, panel beating, spray painting, domestic home renovation, residential building construction, subcontracting carpentry to general building, textile manufacturing, home furniture manufacturing, meeting support word processing services, computer help desk support services, clerical activities supporting patient records, provision of home delivered pizzas, long day child care child minding.

   _____

2. What type/s of apprenticeships are offered in this business e.g. mechanic, spray painter, plumber, carpenter, hair dresser, chef?

   _____

   _____

3. Circle the number of years which best represents your experience in employing apprentices.

   1 year 2/3 years 4/5 years More than 5 years

If you would like the researchers to make contact with you to discuss the research or to have the opportunity to participate in follow-up discussions on results please complete the following contact details:

Name: _____ Title/Position: _____

Telephone: _____ Fax: _____

E-mail: _____ Preferred Time: _____

Other comments or needs: _____

_____

Please complete the remainder of the survey which seeks your opinion about apprentices' workplace literacy skills.

Return in the reply paid envelope provided to: S. O'Neill, CALL, Griffith University, Nathan, Q 4111
Phone: 07 3875 7091; Fax: 07 3875 7090

Survey of Workplace Literacy Skills February 2000

The following statements reflect what competent, literate apprentices can do in the workplace

Based on apprentices who have commenced employment in this businesses over the last two years please circle the rating which best shows how much you agree they have possessed adequate English language and literacy skills to do the activities listed below.

A rating of 1 means you 'strongly disagree', a rating of 2 means you 'disagree', a rating of 3 means you 'neither agree nor disagree', a rating of 4 means you 'agree' and a rating of 5 means you 'strongly agree'.

Apprentices who have commenced employment in this business over the last two years possessed adequate English language and literacy skills to:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Understand times and dates.	1	2	3	4	5
Take telephone messages accurately.	1	2	3	4	5
Identify the cause of problems.	1	2	3	4	5
Follow verbal directions.	1	2	3	4	5
Begin learning in the workplace.	1	2	3	4	5
Write for study needs.	1	2	3	4	5
Prioritise their work.	1	2	3	4	5
Use computers as required.	1	2	3	4	5
Take responsibility for their own work.	1	2	3	4	5
Show sensitivity to customers' needs.	1	2	3	4	5
Write legibly.	1	2	3	4	5
Work cooperatively in a team to achieve a common goal.	1	2	3	4	5
Write for workplace needs e.g. notes, messages, letters.	1	2	3	4	5
Discuss what they do or do not understand.	1	2	3	4	5
Communicate effectively with supervisors.	1	2	3	4	5
Understand visual communication e.g. signs, pictures, advertising material.	1	2	3	4	5

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Phone: 07 3875 7091; Fax: 07 3875 7090

Survey of Workplace Literacy Skills February 2000

Apprentices who have commenced employment in this business over the last two years possessed adequate English language and literacy skills to:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
'Give and take' to help achieve the team's goal.	1	2	3	4	5
Understand and use technical language.	1	2	3	4	5
Communicate effectively with customers.	1	2	3	4	5
Pay attention to detail.	1	2	3	4	5
Perform their workplace duties.	1	2	3	4	5
Follow written instructions.	1	2	3	4	5
Do basic mathematical calculations (with or without a calculator).	1	2	3	4	5
Carry out sequences of activities.	1	2	3	4	5
Put workplace health and safety rules into practice.	1	2	3	4	5
Complete workplace forms e.g. time sheets, work orders.	1	2	3	4	5
Take the viewpoint of others into account.	1	2	3	4	5
Understand instructional guides and manuals	1	2	3	4	5
Read to carry out their work duties.	1	2	3	4	5
Participate in training discussions.	1	2	3	4	5
Use study skills.	1	2	3	4	5
Learn skills in the workplace.	1	2	3	4	5
Communicate with their co-workers.	1	2	3	4	5
Understand workplace health and safety rules.	1	2	3	4	5
Understand workplace processes and products.	1	2	3	4	5
Participate in off-the-job training needs.	1	2	3	4	5
Interpret graphical information.	1	2	3	4	5
Read training materials.	1	2	3	4	5
Listen to their supervisor/s.	1	2	3	4	5
Deal with misunderstandings and problems.	1	2	3	4	5

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Phone: 07 3875 7091; Fax: 07 3875 7090

Survey of Workplace Literacy Skills February 2000

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Write for workplace learning needs.	1	2	3	4	5
Read and understand plans/diagrams/visual materials.	1	2	3	4	5
Spell and punctuate their writing.	1	2	3	4	5
Appreciate constructive criticism.	1	2	3	4	5
Understand key concepts and issues in their workplace.	1	2	3	4	5
Understand on-the-job training needs.	1	2	3	4	5
Find information.	1	2	3	4	5

1. In your opinion in what ways do apprentices' literacy skills assist most in this business?

2. In your opinion in what ways do apprentices' literacy skills need to be improved to enhance workplace learning and performance in this business?

Other comments: A space is provided below for any other comments you may wish to make. Please contact the researchers if you require any assistance or if you would like to discuss any aspect of the research.

Please provide an estimate of the time taken to complete this form.

Include

- The time actually spent reading the instructions, working on the question and obtaining the information.
- The time spent by all employees in collecting and providing this information.

☐ hrs ☐ mins

We thank you for the time you have just spent providing this important information. It is greatly appreciated. Please return by Wednesday 01 March 2000. The survey results will be published by NCVER in September 2000.

Return in the reply paid envelope provided to: S. O'Neill, CALL, Griffith University, Nathan, Q 4111
Phone: 07 3875 7091; Fax: 07 3875 7090

Centre for Applied Linguistics and Languages
Griffith University.

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Survey of Workplace Literacy Skills
February 2000

Please complete the questionnaire and post in the reply paid envelope by **Wednesday 01 March 2000.**

1. Are you an apprentice or trainee? Please circle the position which best describes yours.

   (a) Apprentice (b) Trainee

2. What is the Business/Industry Area of your apprenticeship or traineeship e.g. Automotive, Textiles, Electrical, Electronics, Retail? _____

3. What type of apprenticeship or traineeship do you have? Please describe below.

   (a) I am an apprentice _____ (e.g. mechanic, plumber, hair dresser, chef)

   (b) I am a trainee _____ (e.g. administration officer, bar attendant)

4. Circle which year of your apprenticeship or traineeship you are doing in 2000.

   1st year 2nd year 3rd year 4th year

5 Please circle the age group to which you belong.

   15-19yrs 20-24yrs 25-29yrs 30-35yrs 40yrs – plus

6 Is English the main language you speak at home? Yes No

   If no, please write which language you speak at home. _____

7 Please circle the last year of schooling you completed.

   Before Year 10 Year 10 Year 11 Year 12

8 Have you gained any qualifications since you left school e.g. Certificate, Diploma, Degree? Yes No
   If yes, please list them below.

   _____

   _____

9 Are you doing a course for your apprenticeship/traineeship? Yes No

   If yes, please list it below e.g. Certificate III Office Administration, Certificate II Community Services, Certificate IV Information Technology

   _____

10. Please list the things you do for on-the-job training e.g. go to talks, watch demonstrations, read manuals

   _____

   _____

Remember your response is confidential so you do not have to give your name.
But if you would like the researchers to contact you to discuss the research or you would like to participate in follow-up discussions please complete the following contact details:

Name: _____ Telephone: _____ Fax: _____

E-mail: _____ Preferred Time: _____

Return in the reply paid envelope provided to: S. O'Neill, CALL, Griffith University, Nathan, Q 4111
Phone: 07 3875 7091; Fax: 07 3875 7090

Survey of Workplace Literacy Skills February 2000

The following statements reflect what apprentice and trainees have to do in their job.

Based on your experience as an apprentice or trainee please circle the rating which best shows how much you agree that your literacy skills are okay to do the activities listed below.

A rating of 1 means you 'strongly disagree', a rating of 2 means you 'disagree', a rating of 3 means you 'neither agree nor disagree', a rating of 4 means you 'agree' and a rating of 5 means you 'strongly agree'.

In my experience as an apprentice or trainee my English language and literacy skills are adequate to:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Understand times and dates.	1	2	3	4	5
Take telephone messages accurately.	1	2	3	4	5
Identify the cause of problems.	1	2	3	4	5
Follow verbal directions.	1	2	3	4	5
Begin learning in the workplace.	1	2	3	4	5
Write for study needs.	1	2	3	4	5
Prioritise my work.	1	2	3	4	5
Use computers as required.	1	2	3	4	5
Take responsibility for my own work.	1	2	3	4	5
Show sensitivity to customers' needs.	1	2	3	4	5
Write legibly.	1	2	3	4	5
Work cooperatively in a team to achieve a common goal.	1	2	3	4	5
Write for workplace needs e.g. notes, messages, letters.	1	2	3	4	5
Discuss what I do or do not understand.	1	2	3	4	5
Communicate effectively with my supervisors.	1	2	3	4	5
Understand visual communication e.g. signs, pictures, advertising material.	1	2	3	4	5

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Phone: 07 3875 7092; Fax: 07 3875 7090

Survey of Workplace Literacy Skills February 2000

In my experience as an apprentice or trainee my English language and literacy skills are adequate to:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
'Give and take' to help achieve the team's goal.	1	2	3	4	5
Understand and use technical language.	1	2	3	4	5
Communicate effectively with customers.	1	2	3	4	5
Pay attention to detail.	1	2	3	4	5
Perform my workplace duties.	1	2	3	4	5
Follow written instructions.	1	2	3	4	5
Do basic mathematical calculations (with or without a calculator).	1	2	3	4	5
Carry out sequences of activities.	1	2	3	4	5
Put workplace health and safety rules into practice.	1	2	3	4	5
Complete workplace forms e.g. time sheets, work orders.	1	2	3	4	5
Take the viewpoint of others into account.	1	2	3	4	5
Understand instructional guides and manuals	1	2	3	4	5
Read to carry out their work duties.	1	2	3	4	5
Participate in training discussions.	1	2	3	4	5
Use study skills.	1	2	3	4	5
Learn skills in the workplace.	1	2	3	4	5
Communicate with my co-workers.	1	2	3	4	5
Understand workplace health and safety rules.	1	2	3	4	5
Understand workplace processes and products.	1	2	3	4	5
Participate in off-the-job training needs.	1	2	3	4	5
Interpret graphical information.	1	2	3	4	5
Read training materials.	1	2	3	4	5
Listen to my supervisor/s.	1	2	3	4	5
Deal with misunderstandings and problems.	1	2	3	4	5

Return in the reply paid envelope provided to: S. O'Neill, CALL, Griffith University, Nathan, Q 4111
Phone: 07 3875 7091; Fax: 07 3875 7090

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	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Write for workplace learning needs.	1	2	3	4	5
Read and understand plans/diagrams/visual materials.	1	2	3	4	5
Spell and punctuate my writing.	1	2	3	4	5
Appreciate constructive criticism.	1	2	3	4	5
Understand key concepts and issues in their workplace.	1	2	3	4	5
Understand on-the-job training needs.	1	2	3	4	5
Find information.	1	2	3	4	5

11. Which of your English skills are you most happy with?

12. Which of your English skills would you like to improve to help you work and study better?

Other comments: A space is provided below for any other comments you may wish to make. Please contact the researchers if you require any assistance or if you would like to discuss any aspect of the research.

Please provide an estimate of the time taken to complete this form.
Include the time actually spent reading the instructions and answering the questions.

We thank you for the time you have just spent providing this important information. It is greatly appreciated. Please return by Wednesday 01 March 2000. The survey results will be published by NCVER in September 2000.

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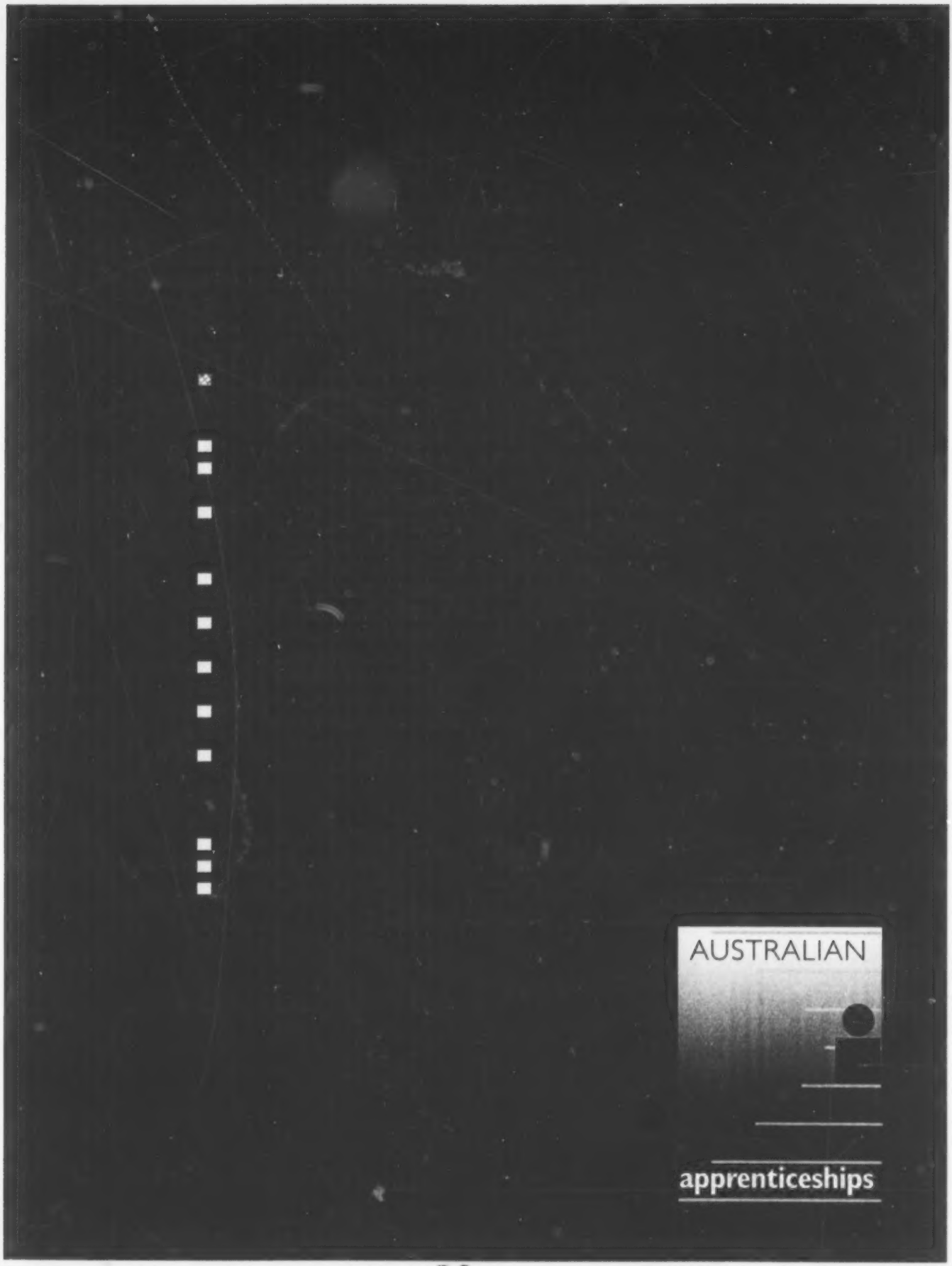
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